


Exhibit 1

STATE OF CALIFORNIA

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California's Deployment Plan for the National Electric Vehicle Infrastructure Program

PREPARED BY



CALIFORNIA
ENERGY COMMISSION

California Department of Transportation California Energy Commission

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California's Plan for Electric Vehicle Infrastructure Deployment

Table of Contents

California's Plan for Electric Vehicle Infrastructure Deployment	2
Table of Contents.....	2
List of Tables	3
List of Figures	3
Abbreviations & Terms.....	4
Introduction.....	5
Dates of State Plan for Electric Vehicle Infrastructure Deployment Development and Adoption.....	7
State Agency Coordination	8
Public Engagement	9
Stakeholders Involved in Plan Development	10
Public Outreach.....	13
Plan Vision and Goals	14
Seamless Travel	17
Equity	17
Reliability.....	17
Buildout.....	17
Contracting	18
Existing and Future Conditions Analysis	19
State Geography, Terrain, Climate and Land Use Patterns.....	19
State Travel Patterns, Public Transportation Needs, Freight and Other Supply Chain Needs	22
AFC - Corridor Networks	25
Round 6 Designations – EV Corridor Pending.....	27
Rounds 1 -5 Designations – EV Corridor Pending Corridors	27
Rounds 1-5 Designations – EV Corridor Ready Corridors	28
Existing Locations of Charging Infrastructure Along AFCs.....	29
Known Risks and Challenges	31
EV Charging Infrastructure Deployment	33
Funding Sources.....	33

2022 Infrastructure Deployments/Upgrades.....	34
Fiscal Year 2023-26 Infrastructure Deployments.....	40
State, Regional, and Local Policy	40
Implementation.....	41
Strategies for EVSE Operations & Maintenance	41
Strategies for Identifying Electric Vehicle Charger Service Providers and Station Owners.....	42
Strategies for EVSE Data Collection & Sharing.....	43
Strategies to Address Resilience, Emergency Evacuation, Snow Removal/Seasonal Needs	43
Strategies to Promote Strong Labor, Safety, Training, and Installation Standards	44
Civil Rights	45
Equity Considerations	46
Identification and Outreach to Disadvantaged Communities (DACs) in the State..	47
Process to Identify, Quantify, and Measure Benefits to DACs Through this Plan	49
Labor and Workforce Considerations	50
Cybersecurity	52
Program Evaluation	53
Discretionary Exceptions.....	54
Appendix A: National Environmental Policy Act (NEPA) Documents.....	54

List of Tables

Table 1: Key Milestones for California's NEVI Deployment Plan	7
Table 2: Rounds 1 – 6 Alternative Fuel Corridors (AFC) for Electricity	38

List of Figures

Figure 1: Excerpt from the California Legislative Analyst's Office's Climate Change Impacts Across California – Crosscutting Issues	22
Figure 2: Designated and Round 6 Alternative Fuel Corridors for Electric Vehicles.....	26
Figure 3: Alternative Fuel Corridors and Existing Public DCFC and Level 2 Chargers in California	30
Figure 4: Existing DCFC Along Alternative Fuel Corridors.....	35
Figure 5: NEVI Built-Out Corridors and Gaps.....	36
Figure 6: Disadvantaged and Low-Income Communities and Federally Recognized Tribal Lands.....	48

Abbreviations & Terms

Abbreviation	Term
AFC	Alternative Fuel Corridor
AFDC	Alternative Fuels Data Center
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CEC	California Energy Commission
CFAC	California Freight Advisory Committee
CPUC	California Public Utilities Commission
CTC	California Transportation Commission
CWDB	California Workforce Development Board
DACAG	Disadvantaged Communities Advisory Group for CEC and CPUC
DCFC	Direct Current Fast Chargers
Deployment Plan	Electric Vehicle Infrastructure Deployment Plan
ETP	Employment Training Panel
EV	Electric Vehicle
EVITP	Electric Vehicle Infrastructure Training Program
EVSE	Electric Vehicle Supply Equipment
GFO	Grant-Funding Opportunity
GO-Biz	Governor's Office of Business and Economic Development
HRCC	High Road Construction Careers
H RTP	High Road Training Partnerships
ICT	Innovative Clean Transit
IIJA	Infrastructure Investment and Jobs Act
IOU	Investor-Owned Utility
Joint Office	Joint Office of Energy and Transportation a partnership between the United States Department of Transportation and United States Department of Energy

Abbreviation	Term
NAAC	Native American Advisory Committee
NEVI	National Electric Vehicle Infrastructure Formula Program
NREL	National Renewable Energy Laboratory
O&M	Operations and Maintenance
OJT	On-the-Job Training
PKI	Public Key Infrastructure
SAE	Society for Automotive Engineers
VMT	Vehicle Miles Traveled
ZEV	Zero Emission Vehicles
ZIP	ZEV Infrastructure Plan

Introduction

California is committed to reducing emissions from the transportation sector by increasing the adoption of zero-emission vehicles (ZEVs). Through legislation, regulatory action, and Executive Orders, California is making the transition across market segments ranging from passenger cars to heavy-duty trucks. To support widespread adoption of electric vehicles (EV), California is striving to deploy 250,000 public and shared private electric vehicle chargers by 2025 and forecasts the need for 1.2 million chargers by 2030 for light-duty vehicles and 157,000 chargers for medium- and heavy-duty vehicles. The light-duty target includes public chargers that are available at parks, shopping centers, hotels, public buildings, etc., and shared private electric vehicle chargers, such as those at workplaces and multi-unit dwellings.

California's progress and strategy to achieve these goals is described in more detail in the draft ZEV Infrastructure Plan (ZIP). The ZIP describes public funding of more than \$194 million committed to medium- and heavy-duty ZEV infrastructure and more than \$109 million invested in light-duty EV charging. Current and proposed investments, including National Electric Vehicle Infrastructure (NEVI) funding, are expected to total about \$3 billion over five years. NEVI funding is proposed to be deployed as part of an integrated and holistic strategy that will include investments in light-, medium-, and heavy-duty vehicles, and both EV charging and hydrogen fueling.

Readily available EV charging infrastructure is a key component to the adoption of EVs. EV drivers, especially those with access to only one vehicle, need to be able to drive to the same places they drove to in gasoline or diesel-powered vehicles. Access to EV chargers needs to be available to all drivers, including those in disadvantaged, low-income, Tribal, and rural communities. EV adoption is growing rapidly and charging

infrastructure needs to meet the demand. Otherwise, adoption of EVs will be disproportionate across population segments.

On November 15, 2021, President Joe Biden signed the Infrastructure Investment and Jobs Act (IIJA), which included significant formula and discretionary grant funding to advance ZEV infrastructure deployment. California's share from the NEVI Formula Program is estimated at \$384 million over five years. California agencies and communities are expected to be eligible to apply for additional funding as part of the \$2.5 billion discretionary Charging and Fueling Infrastructure grant program administered by the Federal Highway Administration.

The purpose of the NEVI Formula Program is to "provide funding to States to strategically deploy EV charging infrastructure and to establish an interconnected network to facilitate data collection, access, and reliability." This goal will be met through the creation of a convenient, affordable, reliable, and equitable network of chargers throughout the country. NEVI funding will provide charging infrastructure along some of the busiest interstates in California, as well as rural state routes. The funding will not only facilitate the travel of electric vehicle drivers within California but will also provide for ease of travel to the neighboring states of Arizona, Nevada, and Oregon.

In February 2022, the newly created Joint Office of Energy and Transportation, a partnership between the United States Department of Transportation and United States Department of Energy, developed and issued NEVI formula program guidelines and guidance for the development of the Electric Vehicle Infrastructure Deployment Plans. These guidelines provide each state with the flexibility to develop a plan for NEVI funds that meets the needs and goals of the state.

To maximize NEVI investments and benefits to travelers, California's initial deployment plan includes ongoing engagement and outreach efforts to shape the continued development and refinement of plan elements. The initial deployment plan will focus on investments in light-duty vehicle charging infrastructure and will consider projects that can also accommodate medium- and heavy-duty charging infrastructure. Subsequent plans will reevaluate NEVI investments across segments and will continue to evaluate the NEVI funding in the context of the broader set of state and federal investments in light-duty, medium-duty, and heavy-duty vehicle infrastructure.

Deployment of NEVI-funded infrastructure will build on the existing infrastructure along California's Alternative Fuel Corridors (AFC) by filling gaps in the AFC network and upgrading existing sites to meet the latest AFC criteria to achieve "fully built-out" status. California may nominate additional routes for AFC designation, with consideration given to rural locations and historically disadvantaged and low-income communities where private investment in electric vehicle supply equipment (EVSE) is lacking. Additionally, emphasis will be placed on the deployment of EVSE along the highways and routes that lead to national parks and forests within the state, as well as many state parks, forests, and beaches.

The deployment plan will be updated each year to reflect progress of the previous year, identify new challenges and opportunities, highlight future deployment plans, and

ensure alignment with California's EV charging infrastructure planning efforts, such as the state's ZIP. California is committed to reviewing the outcomes from the deployment plan to determine best practices, ensure that the plan meets the program guidelines, and to confirm that the plan is accomplishing the state's goals for a connected network of EV chargers.

Dates of State Plan for Electric Vehicle Infrastructure Deployment Development and Adoption

The development of California's deployment plan is a coordinated effort between the California Department of Transportation (Caltrans) and the California Energy Commission (CEC). Final state approval and adoption will be jointly authorized by the:

- Caltrans Director
- California State Transportation Agency (CalSTA) Secretary
- California Energy Commission Lead Commissioner for Transportation

Table 1: Key Milestones for California's NEVI Deployment Plan

Anticipated Date	Milestone
February - May 2022	Initial Draft Preparation & Stakeholder Engagement
June 2022	Internal, State Agency, and Stakeholder Review
Early July 2022	Final Deployment Plan Completed
Late July 2022	Approval and Adoption of Deployment Plan
August 2022	Submittal of Deployment Plan to the Federal Highway Administration
Late September 2022	Approval by the Federal Highway Administration
Qtr. 4 2022	Pre-Solicitation Workshops & Solicitation Development
Qtr. 4 2022	Continued Engagement with Stakeholders and Communities, including Tribal Governments
Qtr. 4 2022 – Qtr. 1 2023	Publish Solicitation
Qtr. 1 2023	Application Scoring and Review
Qtr. 2 2023	Preparation of Contractual Agreements for Deployment of Charging Infrastructure
Qtr. 2 – Qtr. 3 2023	Execution of Contractual Agreements and Commencement of Projects

State Agency Coordination

On September 23, 2020, Governor Gavin Newsom signed Executive Order N-79-20, setting the following zero-emission vehicle targets for California:

- 100% of in-state sales of new passenger cars and light-duty trucks will be zero-emission by 2035,
- 100% zero-emission medium- and heavy-duty vehicles operating in the state by 2045 where feasible and by 2035 for drayage trucks, and,
- 100% zero-emission off-road vehicles and equipment operations by 2035, where feasible.

To help meet these targets, Governor Newsom tasked the Governor's Office of Business and Economic Development (GO-Biz) to collaborate with other agencies and partners to direct the development of the Administration's ZEV Market Development Strategy (ZEV Strategy).¹ The ZEV Strategy outlines the roles of state agencies in building and incentivizing the ZEV market and presents each agency's objectives. Each year, each agency submits an action plan to GO-Biz which describes the agency's actions, priorities, and equity strategies to support the ZEV Strategy.

Collaboration between Caltrans and the CEC in the development of California's deployment plan was based upon each agency's core responsibilities, as well as those outlined in the ZEV Strategy. Caltrans manages more than 50,000 miles of California's highway and freeway lanes that serve those who walk, bike, drive, or use transit, and plays a supporting role in the ZEV Strategy. The CEC is California's lead agency for zero-emission infrastructure and funds projects to accelerate ZEV infrastructure rollout and improve equity. NEVI funding will complement CEC funding as part of an integrated strategy for infrastructure deployment. The CEC evaluates charging needs to support California's plug-in EV goals and analyzes grid integration, energy resilience, EVSE equipment standards, and funding needs to accommodate the growing ZEV infrastructure charging market.

In addition to responsibilities outlined in the ZEV Strategy, the California Air Resources Board (CARB), GO-Biz, and the California Public Utilities Commission (CPUC) provided input and guidance during the development of the initial deployment plan. These state agencies are each responsible for components essential to a sustainable, connected network of EV chargers and EV adoption.

To maximize opportunities to utilize U.S.-made EV supply equipment, these state agencies also worked together to identify EV charger manufacturers that sell, manufacture, or operate in California. The effort identified six California manufacturers that manufacture non-proprietary DC fast chargers (DCFC).

¹ https://static.business.ca.gov/wp-content/uploads/2021/02/ZEV_Strategy_Feb2021.pdf

To mitigate supply issues and encourage the utilization of US-made products, the CEC is utilizing state funds to develop funding incentives that expand California's in-state capacity of ZEV related manufacturing. This includes manufacturing EV charging infrastructure, vehicles, and vehicle components such as EV batteries. However, projects to expand manufacturing capacity are labor- and capital-intensive and can take years to complete as manufacturers expand their production lines.

Public Engagement

Throughout the development of the initial deployment plan, California engaged with a variety of groups, including the public, state and local government agencies, Native American Tribal Governments, industry representatives, environmental advocacy organizations, and representatives of rural and disadvantaged communities. The outreach was accomplished through the CalSTA/Caltrans Infrastructure Investment and Jobs Act Transition to ZEVs Sub-Working Group, informational workshops, presentations at regular state agency meetings, and small group meetings.

California anticipates additional engagement and outreach throughout the first year of the plan to further reach stakeholders and community members. This outreach and engagement will build awareness of California's EV charging infrastructure efforts and the NEVI formula funding. Efforts will also be made to continue to collect information, input, and feedback from community members, partner agencies, and stakeholders about challenges in EV adoption, and the siting, installation, and operation of EV chargers.

The outreach goals include:

- Building awareness and understanding of the deployment plan.
- Engaging communities in the deployment planning process with an emphasis on engaging disadvantaged communities, low-income communities, and rural communities.
- Soliciting meaningful input from stakeholders and local agencies by initiating broad, inclusive conversations and leveraging the expertise of subject matter experts.
- Strengthening relationships with Tribal governments.
- Building support for the adoption of EVs through the deployment of EV charging infrastructure.

To gain additional strategic input and technical guidance to support the continued development of the deployment plan, California will engage stakeholders and partner agency staff with experience in planning, designing, building, operating, and maintaining EV charging infrastructure. Engagement efforts will also be directed toward advocacy groups and stakeholders with a demonstrated interest in the advancement of EVs. The aim is to gather diverse input representing all urban, suburban, and rural geographic areas of the state. Additional effort will be made to include those groups

representing disadvantaged, low-income, Tribal, and rural communities.

The engagement and outreach efforts support the goals and objectives of the NEVI deployment plan by:

- Providing technical and non-technical input to guide the further development of the deployment plan.
- Sharing data and contributing recommendations for additional alternative fuel corridor nominations.
- Contributing to the identification and prioritization of sites for EV charging infrastructure.
- Providing technical and electrical grid-based knowledge of geographic/service areas.
- Advising on data collection, evaluation, and best practices to enhance the deployment plan's technical or contracting requirements.
- Facilitating the development of a statewide plan through the engagement of those who represent a range of socioeconomic, ethnic, cultural, and geographic groups with a cross-section of people of various interests and places of residence.

This additional outreach will enable California to further engage with community-based organizations and those who represent and reside in disadvantaged, low-income, Tribal, and rural communities. The outreach will include more robust conversations with the Tribal governments, as well as those living in rural communities. Due to the size of the state, California will rely on Metropolitan Planning Organizations (MPOs), Regional Transportation Planning Agencies (RTPAs), and state agency liaisons to help with engagement. California will also reach out to groups that promote clean energy and EVs within disadvantaged, low-income, Tribal, and rural communities.

Stakeholders Involved in Plan Development

Shortly after the IIJA was enacted, CalSTA convened the statewide IIJA Transportation Implementation Working Group. The working group was comprised of state and local agencies, the Federal Highway Administration, and other transportation stakeholders, including Tribal governments and the private sector. The goal of the working group was to develop action plans for implementing IIJA programs. From this effort, sub-working groups were formed to facilitate in-depth discussions in specific policy areas.

The Transition to Zero Emissions sub-working group was formed to contribute to the development and implementation of California's deployment plan, determine the need for state legislative changes to implement the plan, and determine how the plan aligns with the state's goals and planning efforts. The first meeting, held on March 1, 2022, included an overview of the IIJA zero-emission provisions and the state's initial thoughts for the program implementation concept. The attendance at this meeting was 103.

The second meeting of the Transition to Zero Emissions sub-working group on April 5,

2022, had attendance of 104. This meeting included a discussion of the role of the NEVI Program in California's EV infrastructure investment landscape, the guiding principles that would lead the deployment plan's development, and a discussion of how the federal administration's Justice40 initiative would be integrated with the data traditionally used by California to define disadvantaged and low-income communities.²

The attendance at the third meeting of the Transition to Zero Emissions sub-working group on May 16, 2022, was 217. The meeting included a review of the Round 6 Alternative Fuel Corridors nominations as well as a discussion on the prioritization of corridors. The group also discussed possible siting requirements.

The sub-working group was engaged throughout the development of the plan and many of the attendees followed up with emails and phone calls to both provide input and request information.

Participants in the Transition to Zero Emissions sub-working group included representatives from the industries, agencies, and groups listed below. The organizations shown in **bold** represent disadvantaged communities.

- Business associations
- California Air Resources Board
- California Department of Food & Agriculture
- California Energy Commission
- California Governor's Office of Business and Economic Development
- California High Speed Rail Authority
- California Office of Emergency Services
- California State Transportation Agency
- California Transportation Commission
- Chambers of Commerce
- Communications infrastructure providers
- Community Choice Energy Associations
- **Community-based organizations**
- County governments with existing EV charging programs
- **Disadvantaged Communities Advisory Group**
- Electric utilities
- Energy consultants
- Environmental consultants
- **Environmental justice, equity, and other community advocacy organizations with an interest in EV charging**
- EV advocacy groups
- EV charging infrastructure service/repair companies
- Hydrogen fuel cell manufacturers
- Local air districts
- Metropolitan Planning Organizations
- **Native American Advisory Committee**
- **Non-profit organizations involved with green energy**

² <https://www.whitehouse.gov/environmentaljustice/justice40/>

- Petroleum fuel manufacturers
- Port authorities
- Private fleet operators
- Private sector EV charging station owners and network operators
- Public transportation agencies and authorities
- Regional Transportation Planning Agencies
- Representatives of California assemblymembers
- Representatives of California senators
- Transportation authorities
- Representatives of the University of California
- Vehicle manufacturers

In addition to the Transition to Zero Emissions sub-working group meetings, representatives from Caltrans and the CEC reached out to organizations and community groups with whom the two organizations engage on an ongoing basis.

California is home to 109 federally recognized Native American tribes with nearly 100 separate reservations or Rancherias.³ In 1996, the Native American Advisory Committee (NAAC) was established to ensure that Caltrans receives direct advice from Tribal governments on issues pertaining to all modes of transportation within California. The NAAC meetings further government-to-government working relationships and provide an opportunity to share information. Members of the NAAC advocate for all Native Americans of California and are nominated by Tribes and Indian organizations.

Caltrans met with the NAAC on April 23, 2022, to provide an overview of the NEVI Formula Funding Program and California's NEVI deployment plan concept. Caltrans and the CEC will continue to reach out to the tribes, as many of the Native American Tribes have facilities or own property where there are gaps in EV charging infrastructure. Tribes can play an important role in providing charging infrastructure along California's interstates and rural areas of the state.

The CEC and Caltrans also met several times with members of the Disadvantaged Communities Advisory Group (DACAG). DACAG was formed in 2015 to ensure that disadvantaged communities benefit from proposed clean energy and pollution reduction programs. The group meets throughout the year to review CEC and CPUC clean energy programs and policies. Each member is either from, or represents, a disadvantaged community and the group reflects the diversity of California. During the meetings between DACAG, CEC, and Caltrans, DACAG members asked questions specific to areas of concern within the communities they represent. Employment opportunities and the reduction of harmful emissions from medium- and heavy-duty vehicles were stated as deployment plan outcomes that the group thought would most benefit their communities.

Many of the comments received from stakeholders were incorporated into the deployment plan. The concerns expressed and information provided by stakeholders

³<https://www.courts.ca.gov/3066.htm#:~:text=How%20many%20California%20tribes%20are,lands%20that%20cross%20state%20boundaries>. California Courts – Reviewed 05/04/2022

will also be incorporated into the development of the Grant Funding Opportunity (GFO) and will help to shape elements of the evaluation criteria and contractual obligations.

Freight and Goods Movement

In 2013, Caltrans established the California Freight Advisory Committee (CFAC). The CFAC is a chartered member advisory body representing public and private sector freight stakeholders, including representatives of ports, shippers, carriers, freight-related associations, the freight industry workforce, Caltrans, and local governments. CFAC meets quarterly to participate in the development of the California Freight Mobility Plan and to advise on freight-related priorities, issues, projects, and funding needs.

Extensive and continuous stakeholder outreach is planned for the California Freight Mobility Plan update, which will include an analysis of the needed infrastructure, projects, and operations for the deployment of zero-emission medium- and heavy-duty vehicles and the development of freight corridors. During this outreach, Caltrans will have opportunities to engage with this group regarding the deployment plan.

Caltrans is coordinating with the California Transportation Commission (CTC) and a variety of freight industry stakeholders on the CTC's Clean Freight Corridor Efficiency Assessment under Senate Bill (SB) 671. The assessment seeks to identify freight corridors and infrastructure needed to support the deployment of zero-emission medium- and heavy-duty vehicles. The CTC's assessment also considers the potential for emissions-reduction, truck parking facilities, congestion reduction, improved road safety, resiliency, and impacts to neighboring communities. The SB 671 committee meets a minimum of once monthly. In March 2022, the group discussed the need for alignment of the Clean Freight Corridors with California's Alternative Fuel Corridors and the deployment plan. Outreach and engagement with this committee will continue throughout the development of California's deployment plan.

During the development of the initial deployment plan, many organizations requested meetings with Caltrans and the CEC to share information and to ask for presentations to be delivered to their organization or group. Because of the time frame for plan development, not all requests for meetings and presentations were met. Caltrans and the CEC will strive to contact these organizations prior to holding pre-solicitation workshops.

The California Energy Commission and the California Transportation Commission are also working with stakeholders to identify optimal locations for medium- and heavy-duty charging infrastructure. These findings may be incorporated into subsequent deployment plans.

Public Outreach

Outreach to the public for the initial plan was in the form of a live/online informational workshop on June 14, 2022, with attendance of 335. The workshop was promoted using contact lists from the CEC and GO-Biz. Additionally, Caltrans reached out to MPOs and RTPAs for their assistance in publicizing the workshop to cities and counties.

The workshop introduced the draft deployment plan and provided an overview of the funding, the guiding principles that led the development of the plan, and the deployment plan concept. The public was invited to comment and submit questions through email. The CEC and Caltrans received and reviewed more than 50 comment letters. Written comments were collected in an online, publicly accessible docket established by the CEC. Public comments were integrated into the final draft of deployment plan. Other comments will be incorporated into the development of the GFO and will help to shape elements of evaluation criteria and contractual obligations.

As indicated above California will continue to engage the public throughout implementation of the plan through public workshops, individual stakeholder meetings, and email communications. This outreach will provide the public with plan information, gauge the effectiveness of the plan's progress, and provide feedback for updates to the plan.

Plan Vision and Goals

The vision for California's Deployment Plan is that NEVI funding will play an important part in California's comprehensive strategy to ensure ZEV infrastructure will meet the needs of the growing ZEV market. As described in more detail in the draft ZIP, California is developing EV charging and hydrogen fueling infrastructure to increase access and equitable adoption and accelerate the transition away from fossil fuels. Infrastructure will have to serve the needs of light-, medium-, and, heavy-duty vehicles, and both short- and long-distance travel. Within the overall context of California's strategy, we envision that NEVI funding will help connect California's major population centers and increase connectivity and service in rural areas to reduce barriers to EV adoption.

California's ZEV Market Development Strategy includes four pillars: vehicles, infrastructure, end users, and workforce.⁴ California's strategy for the infrastructure pillar is outlined in the draft ZIP.⁵ The focus of the ZIP is to support the projected ZEV population with charging and fueling infrastructure. The draft ZIP lays out plans to support the development of convenient, accessible, reliable, and equitable EV charging.

California plans to use the estimated \$134 million in formula funding from the first two years of the NEVI Program to primarily provide connectivity for passenger vehicles throughout the state, complementary to state investments. While this first batch of NEVI-funded stations would be designed to serve light-duty vehicles, we will look for ways that station designs can also serve heavier vehicle classes, e.g., with higher-powered chargers or pull-through charging sites. Also, as required by NEVI Guidance, "Station designs should also consider the potential for future expansions

⁴ <https://business.ca.gov/industries/zero-emission-vehicles/zev-strategy/>

⁵ <https://www.energy.ca.gov/sites/default/files/2022-04/CEC-600-2022-054.pdf>

needed to support the electrification and charging demands of medium- and heavy-duty trucks, including station size and power levels.”

California’s goals include:

1. Ensuring ZEV infrastructure will meet the needs of the growing ZEV market.
By 2025:
 - 250,000 electric vehicle chargers, including 10,000 DCFC⁶
 By 2030:
 - 1.2 million chargers, including 37,500 DCFC for light-duty vehicles and 157,000 chargers for medium- and heavy-duty vehicles by 2030.
2. Accelerating deployment and ensuring equitable outcomes.

In future annual deployment plans, California will reassess proposed uses of NEVI funds, including infrastructure that primarily serves light or medium- and heavy-duty vehicles, within the requirements of the NEVI program and in the context of California’s overall funding and deployment strategy.

California forecasts the need for a network of approximately 1.2 million public and private-shared chargers for light-duty vehicles and 157,000 chargers for medium- and heavy-duty vehicles by 2030.⁷ This is a massive scale up: today there are 79,000 public and shared private chargers for light-duty vehicles. NEVI program funding will supplement state funds to assist California in meeting its ambitious goals. Continued investment in DCFC deployment will be crucial to support long-distance travel, provide quick-opportunity charging, and serve drivers who do not have access to charging at home. Nearly every driver will need DCFC at some point. A robust DCFC network will create the backbone for mass EV adoption within California.

California State Funding Context

The CEC’s Clean Transportation Program (CTP) provides grant funding for ZEV infrastructure, as well as other clean transportation investments. The CEC publishes an annual Investment Plan, with input from the CTP Advisory Committee and other stakeholders. The most recent final investment plan, included the following CTP investments:⁸

- Fiscal Year 2021-2022 – Total \$842.2 million, including:
 - \$270.1 million for light-duty EV charging
 - \$57.0 million for hydrogen fueling
 - \$391.4 million for medium- and heavy-duty ZEV infrastructure.

⁶ Executive Order B-48-18 available at <https://www.library.ca.gov/wp-content/uploads/GovernmentPublications/executive-order-proclamation/39-B-48-18.pdf>.

⁷ <https://efiling.energy.ca.gov/getdocument.aspx?tn=238853>

⁸ <https://efiling.energy.ca.gov/GetDocument.aspx?tn=240977>

- Fiscal year 2022-2023 and 2023-2024, the plan allocates:
 - \$43.9 million for light-duty EV charging
 - \$30 million for hydrogen fueling
 - \$298.9 million for medium- and heavy-duty infrastructure.

Through the CTP, the CEC is deploying some of the funding dedicated for medium- and heavy-duty infrastructure through a block grant project known as EnergiIZE.⁹ The project will award grant funding for public charging for medium- and heavy-duty vehicles later in 2022. CEC staff are also developing Innovative Charging and Hydrogen Refueling solicitations that will focus on publicly accessible medium- and heavy-duty infrastructure. Analysis and reporting efforts, such as those pursuant to SB 671, SB 643, and Assembly Bill (AB) 2127, will analyze corridors and assess the infrastructure needed to meet California's zero-emission truck, bus, and off-road vehicle goals.

Additionally, through the CTP, the CEC is developing future funding opportunities for light-duty charging include light duty block grants, known as Communities in Charge and CALeVIP 2.0, expected to open funding windows in late 2022 or early 2023, and competitive solicitations targeting specific cases such as multifamily housing.

Other Federal Funding Opportunities

In addition to EV charging infrastructure investments and NEVI formula funds, California intends to assess new federal discretionary grant programs that support light- or medium- and heavy-duty EV charging infrastructure and, where feasible, pursue directly or support local and regional agencies and private applicants in preparing competitive applications. Over the life of IIJA, new federal funding programs that support transportation zero-emission vehicle adoption include:

- Charging and Fueling Infrastructure Discretionary Grant Program (\$2.5 billion) - administered by the Federal Highway Administration
- Reduction of Truck Emissions at Port Facilities (\$400 million) - administered by the Federal Highway Administration
- Port Infrastructure Development Program (PIDP) (\$2.25 billion) - administered by the Maritime Administration
- Low No Emission Grants Program for Transit (\$2 billion) - administered by the Federal Transit Administration
- Buses and Bus Facilities Formula and Competitive Grants (\$5.1 billion) - administered by the Federal Transit Administration

⁹ <https://www.energiize.org/>

Seamless Travel

Public funding, electric utility investment, and private investment have contributed to California's ZEV charging infrastructure networks, and all will continue to be essential to meeting future goals. Funding through the NEVI Formula Program provides necessary support to build out the state's EV corridors to ensure seamless interstate travel for EV drivers and will be complemented by state funding.

Nominations of AFCs in California are a collaboration between local/regional agencies and Caltrans, the CEC, and GOBiz. In establishing the state's AFCs, local agencies coordinated with Caltrans to submit 55 interstates and U.S. Route/state highway corridors in the first six rounds of AFC nomination. In the first two years of AFC nominations, California focused on electric, hydrogen, and compressed natural gas and liquified natural gas. Factors for selecting the corridors included whether they were part of the National Highway Freight Network System and noting routes near ports and intermodal facilities to support implementation of the Sustainable Freight Action Plan. In Rounds 3 to 6, nominations for EV AFCs were driven more by light-duty vehicle needs and infrastructure. Round 6, in particular, nominations focused on expanding access and connectivity to rural areas and corridors serving disadvantaged and low-income communities.

The AFC designations play a key role in expanding infrastructure to enable widespread consumer adoption of ZEVs. Consumers need confidence they can charge and fuel their vehicles in the communities where they live and work and along major routes. The nominations concentrate on corridors that provide an interconnected network across the state, allowing for intra- and interstate travel.

Equity

Through workshops and outreach, California will ensure equitable and collective decision-making in solicitation design to ensure charger installations are meeting the needs of the communities they serve while providing seamless statewide access.

Reliability

The solicitation process will enable the state to oversee project progress and maintain requirements stated in NEVI Guidance. Reporting requirements will be essential in this solicitation to ensure chargers in the network are functioning with at least 97 percent uptime and meet corridor travel demand. Additional reliability standards for NEVI-funded projects will conform to any regulations resulting from the proposed rulemaking by the Federal Highway Administration issued on June 22, 2022.

Buildout

California anticipates releasing the first solicitation in late 2022. Based on timelines from previous EV charging installation projects, the first chargers should be operational in the second quarter of 2025, with full buildout completed by 2030.

As EV adoption increases in California and successive deployment plans are established, the state will continue to create a connected network of EV chargers to

enable convenient, accessible, reliable, and equitable EV charging for all EV drivers. The network will facilitate data collection, equitable access, and network reliability.

Contracting

Through the CTP, the CEC has awarded over \$1 billion in grant funding through competitive solicitations and first-come-first-served projects. In 2015 and 2016, the CEC funded a corridor charging program. The state intends to utilize the CEC's grant solicitation experience to administer funding to the deployment plan projects. Staff from Caltrans and the CEC, in coordination with other state agencies and the public, will determine how the grant solicitation will be structured to best meet the state's goals and needs and align with federal guidance.

The CEC and Caltrans will jointly develop a competitive grant-funding opportunity (GFO) to seek applications for funding to install DCFCs along California's AFCs. The funding opportunity development process will include research, stakeholder meetings, defining the minimum eligibility and technical requirements, holding at least one public workshop, finalizing the GFO, and releasing the GFO. Input from stakeholders will help to establish a solicitation designed to provide a fair and equitable selection of entities bidding for projects. Completed applications will be scored by an evaluation team comprised of staff from both agencies. Completed applications will be scored by an evaluation team with staff from both agencies.

California will invite applicants to submit proposals for segments based on an analysis of gaps in the network, future charger needs, and geography. Due to the size of the state, generally several gap segments will be grouped by geographical proximity to facilitate construction and maintenance of the sites. Specific sites for stations will not be identified. Instead, applicants will be invited to submit proposals for sites that meet performance standards for:

- DCFC power levels.
- Number of chargers.
- Maximum distance between charging stations.

The standards for segments may exceed the NEVI program minimum standards, depending on analysis of locations, traffic, existing electric utility infrastructure, and other factors. The analysis will consider "current and anticipated market demands for EV charging infrastructure, including with regard to power levels and charging speed, and minimizing the time to charge current and anticipated vehicles."¹⁰

Applicants may propose upgrading existing charging stations or building new charging stations. Upgrading existing stations to meet NEVI requirements may cost less than

¹⁰ The National Electric Vehicle Infrastructure (NEVI) Formula Program Guidance. Page 26.
<https://driveelectric.gov/technical-assistance/>

building new locations. Additionally, some existing charging stations include “stub-outs” with conduit ready for new installations. Funding new stations and upgrading existing ones may allow for greater deployment and access. The current approach is not to favor one option over another, but instead to evaluate applications based on the established criteria.

Applicants will be responsible for locating sites that meet the requirements defined in the GFO, as well as for negotiating site agreements with each host to secure the site for at least the minimum term defined in the solicitation. The GFO may encourage applicants to utilize small businesses that meet the eligibility requirements as site hosts and may be included in the GFO’s Project Locations evaluation criteria section.

To ensure efficient and effective deployment that aligns with broader goals, segments will be ranked according to funding priority. California expects to provide funding for projects in rank order until funding is exhausted. Each update of the deployment plan will assess completed solicitations and re-evaluate priorities.

To ensure efficient ongoing operations and maintenance activities, the solicitation will define operations and maintenance standards and requirements that will be incorporated into the agreement. For example, applications may include an Outreach and Communication Plan that would detail how the applicant will engage communities where EV charging infrastructure will be installed. More detail on California’s approach is in the “Implementation” section. Also, additional standards for operations and maintenance of NEVI-funded projects will conform to any regulations resulting from the proposed rulemaking by the Federal Highway Administration issued on June 22, 2022.

Efficient and effective deployment will also be emphasized in the evaluation of applications. The CEC and Caltrans will evaluate all qualifying bids equitably. When all applications are evaluated, the highest scoring eligible application for each segment will be proposed for an award. The CEC will develop grant agreement packages with proposed awardees. Each agreement will include a scope of work, budget, schedule of products, and terms and conditions. Agreements will require monthly calls and quarterly project reports to communicate progress and quickly address any issues that may arise. In addition, periodic critical project reviews will gauge progress. Finally, a percentage of the budget will serve as a retention to ensure compliance with all requirements, including operations and maintenance.

Existing and Future Conditions Analysis

State Geography, Terrain, Climate and Land Use Patterns

California is a large state with extreme variations in terrain, climate, and land use patterns. This diversity brings challenges to both providing electrical service and EV

chargers installations. As an example, California experiences extreme heat and extreme cold, both factors that impact vehicle charging times. Also, while California has grid capacity to support an increase in EV chargers, there will be areas where EV chargers are needed, but electricity isn't available. To ensure reliable EV charging throughout California a variety of technologies and innovations will need to be utilized. The sections below illustrate just how different areas of the state are by comparing temperatures, rainfall, populations, etc.

State Geography and Terrain

California is bordered by Oregon to the north, by Nevada and Arizona to the east, by the Mexican state of Baja California to the south, and by the Pacific Ocean to the west. Both the highest and lowest points in the 48 contiguous states are within the state of California—Mount Whitney and Death Valley, respectively.

The heartland of California is the Central Valley, which runs for 450 miles through the center of the state between the Coast Ranges to the west and the Sierra Nevada to the east. The valley is the state's agricultural center. The valley's single opening is the delta through which the Sacramento and San Joaquin rivers drain into San Francisco Bay. The valley is sealed off by the Cascade Range to the northeast and by the Klamath Mountains to the northwest. In the south, the Central Valley is closed off by the Tehachapi Mountains, which are regarded as a dividing wall between southern and central California.

While the terrain in the northwestern part of the state is rugged and heavily forested, most of eastern California is desert. The northeastern corner of the state is made up of barren plains and mountains, as well as a volcanic plateau. In the east-central region is the Trans-Sierra desert, which extends along the sheer east escarpment of the Sierra Nevada range and comprises part of the vast interstate Great Basin.

In the southeast lies the Mojave Desert, which, at more than 25,000 square miles, occupies one-sixth of the land area of California. Its landmarks are broad basins, eroded mountains, and fault blocks. Just south of the Mojave Desert is the lower Colorado Desert, which begins in the Coachella Valley and descends to the Imperial Valley adjacent to the Mexican border. More than 4,000 square miles of the desert lie below sea level, including the 300-square-mile Salton Sea, a lake with no outlet formed in 1905–07 when the nearby Colorado River broke out of its channel.

The Sierra Nevada extends for 430 miles. Aside from Mount Whitney (14,494 feet above sea level), 10 other peaks in the Sierra Nevada exceed 14,000 feet in elevation. East-west passes are few but high; some are found at more than 9,000 feet in elevation. There are three national parks in the Sierra Nevada: Kings Canyon, Sequoia, and Yosemite.

The roughly 1,100-mile-long coastline of California is generally mountainous, although lesser elevations surround the three major natural harbors, in San Diego, San Francisco, and Eureka. Much of the terrain in Southern California is plateaus and valleys along the coast, which turns mountainous then to desert toward the eastern part of the state.

Climate

California's climate varies by geography. The climate of coastal California is often compared to that of the Mediterranean with warm, dry summers and wet, mild winters. Farther inland from the coast, the summers become drier and hotter, and the winters are wet and cold enough for frost to accumulate. Continuing east within the state, the climate changes with the elevation. Summer temperatures in the low-lying Colorado Desert can reach a high of 130 °F, while winter temperatures in the Sierra Nevada drop to freezing and provide the snow melt that feeds Yosemite's spectacular waterfalls. In the mountainous regions there are four seasons, however, the majority of California's climate is marked by two seasons—a wet and a dry. Historically, precipitation ranges from more than 170 inches in the northwest to traces in the southeastern desert. Death Valley, with its lowest point at 282 feet below sea level, is the hottest and driest place in North America with an average annual rainfall of only about 2 inches. Coastal rainfall varies, with an annual precipitation average of about 14 inches in Los Angeles and about 20 inches in San Francisco.

Currently, however, California is in its third year of drought. The first four months of 2022 were the driest on record in California. California's two largest reservoirs are at critically low levels. The modest snowmelt seeped into dry ground instead of running off into streams and rivers that lead to the state's aqueducts and reservoirs.

Land Use Patterns

California's land use patterns are shaped by its geography and climate. The largest population centers are along the coast where the temperature is moderate. Nearly 19 percent of the state's population of over 39 million live in the cities of Los Angeles, San Diego, San Jose, and San Francisco. The population of Los Angeles alone exceeds that of 22 states. In these cities, land use is similar – high rise office buildings and dense housing make up the city center. Just outside of the downtown area are manufacturing facilities, then commercial areas with car dealerships and big box stores, and finally the suburbs. California is working to limit suburban sprawl by providing incentives to those who build high density housing or add an auxiliary dwelling unit (ADU) to their property.

The cities in the middle of the state, although less populated, have similar land use patterns where the suburbs are often surrounded by farms. On the eastern side of the state the population is sparse, as is the development.

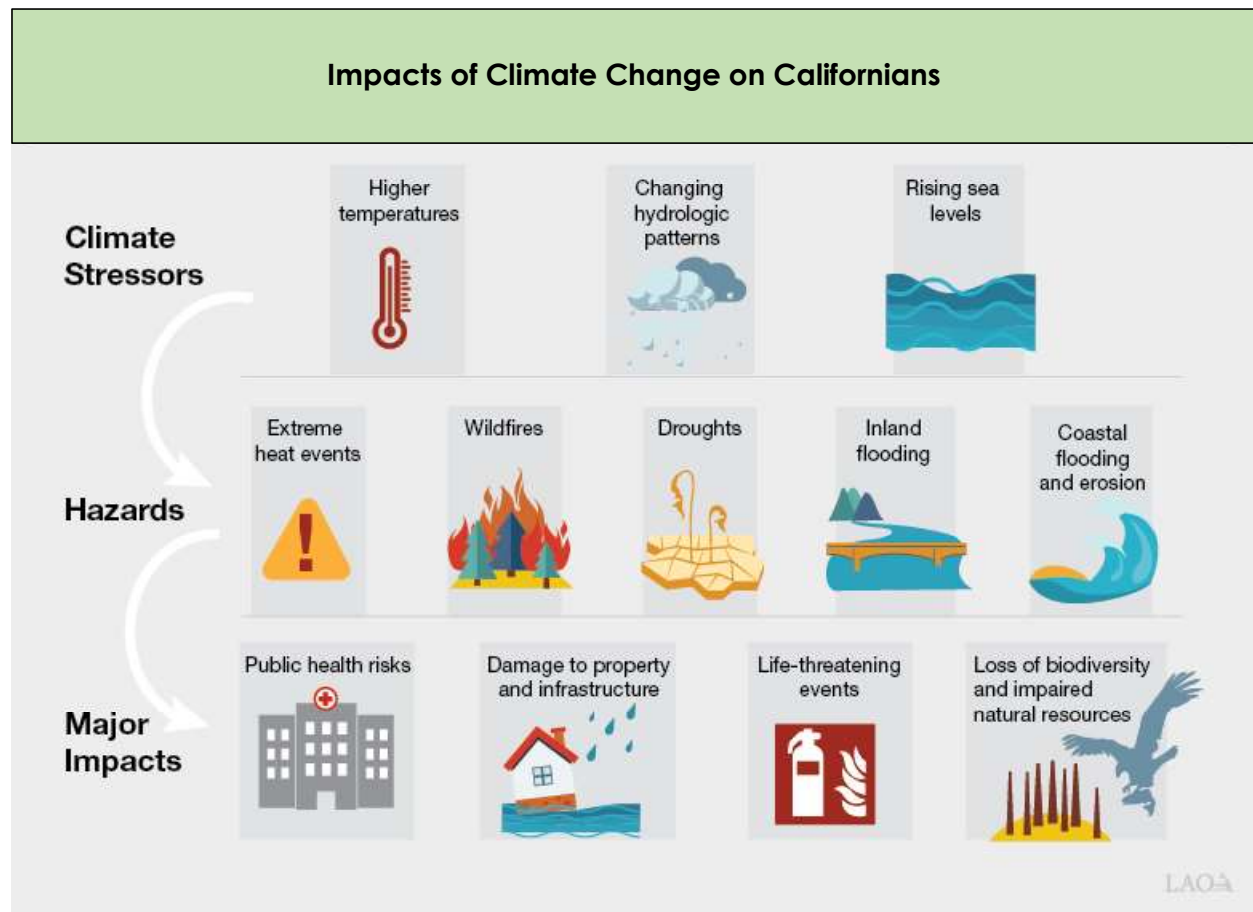
Current and Future Environmental Conditions

California is vulnerable to nearly every climate change stressor and extreme weather threat. Increasing temperatures, more frequent and intense wildfires, heavier rainstorms, extended periods of drought, and rising sea levels and storm surges pose a significant risk to California's natural and human resources and to the state's infrastructure.

The effects of climate change have and will continue to impact the various regions throughout California. For example, increasing temperatures and rising sea-levels will have direct impacts on public health and infrastructure. Drought, coastal and inland flooding, and wildfire will continue to affect people's livelihoods and local economies. Changing weather patterns and more extreme conditions will impact tourism and rural

economies in California, along with changes to agriculture and crops, which are critical to California's economic success. There will also be negative impacts to California's ecosystems, both on land and in the ocean, leading to local extinctions, migrations, and management challenges.

Figure 1: Excerpt from the California Legislative Analyst's Office's *Climate Change Impacts Across California – Crosscutting Issues*



<https://lao.ca.gov/Publications/Report/4575>

State Travel Patterns, Public Transportation Needs, Freight and Other Supply Chain Needs

Travel Patterns

People choose travel options based on where they live, where they work, how safe they feel, how far they are traveling, and the cost of each option, among other factors. In 2015 (California's base year for Transportation Planning), Californians used an automobile for 88 percent of all travel in the state. In many communities, the automobile remains the only viable or convenient means of transportation available.

Statewide Vehicle Miles Traveled (VMT) is used to calculate the total annual miles traveled by all vehicles in the state. Between 2001 and 2017, VMT grew by nearly 14 percent—about the same rate as population growth during this period. VMT is expected to increase by 13 percent but could rise by as much as 35 percent if the state experiences the additional growth forecasted by some. Much of the growth will occur in California's most populous regions of the Bay Area and Los Angeles, with the San Joaquin Valley, Sacramento region, and Inland Empire also experiencing a significant increase due to high population growth estimates, and relatively fewer non-auto options.¹¹

In 2021, over 250,000 electric vehicles were sold in California, bringing the total number of electric vehicles sold in California to over 1 million.¹² Sales are anticipated to continue at this pace in California if vehicles are available for purchase. While much will change over the coming decades, Californians will still be driving, and driving will remain the dominant mode of transportation. Non-auto mode share, primarily biking, walking, and transit, is projected to increase only one percentage point between 2015 and 2050.¹³ Most of the shift will be due to people switching from driving to walking, with transit and biking experiencing minimal increases. In order to reach its climate goals, California must continue to advance clean fuel technologies, including ZEV technology and supportive infrastructure.

Public Transportation Needs

The CARB's Innovative Clean Transit (ICT) regulation requires all public transit agencies to gradually transition to a 100-percent zero-emission bus fleet. Under the ICT regulation, zero-emission bus purchase requirements will begin to apply to transit agencies in 2023. Beginning January 1, 2023, 25% of new bus purchases by large transit agencies each calendar year must be zero-emission buses. The purchase requirement will increase over the course of the decade and will begin to apply to small transit agencies beginning in 2026. As of the end of 2020, 8,761 transit buses were in service in California.¹⁴

Electric vehicle charging for public transportation fleets will require a great deal of power. Upgrades to substations, microgrids, and general infrastructure improvements will be needed to provide the necessary charging capabilities. In addition to providing charging for the transit fleet, transit stations should include multi-modal charging stations that allow for a variety of charging levels for transit users' electric vehicles, bicycles, and scooters.

¹¹<https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/ctp-2050-v3-a11y.pdf>

¹² <https://www.veloz.org/california-first-u-s-state-to-hit-1-million-evs-sold/>

¹³ <https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/ctp-2050-v3-a11y.pdf>

¹⁴<https://www.transit.dot.gov/ntd/data-product/2020-vehicles>

Freight and Other Supply Chain Needs

As of January 1, 2022, there were 645,045 medium- and heavy-duty trucks registered and/or based in California. There are nearly 2.1 million additional heavy-duty trucks that travel throughout California but are based in other jurisdictions and registered under the International Registration Plan. The owners of trucks based outside California pay pro-rated (apportioned) fees based on the percentage of highway mileage traveled in each state.

Freight transportation is a highly competitive business, and the availability and reliability of charging infrastructure to support freight vehicles will be crucial to electrification efforts in the medium- and heavy-duty vehicle sectors. Electric batteries are heavier and take up more of the total allowable weight of a vehicle, so fleets may need additional zero-emission vehicles to transport the same volume of goods. Also, until technology develops further, freight operators may need to stop to charge more frequently than they previously stopped to re-fuel their vehicles.

CARB is developing Advanced Clean Fleets, a medium and heavy-duty zero-emission fleet regulation, with the goal of achieving a zero-emission truck and bus California fleet by 2045 everywhere feasible and earlier for certain market segments such as last mile delivery and drayage applications. The initial focus will be on high-priority fleets with vehicles that are suitable for early electrification, their subhauers, and the entities that hire them. The goal of this effort is to accelerate the number of medium and heavy-duty zero-emission vehicle purchases to achieve a full transition to zero-emission vehicles in California as soon as possible.

Freight transporters face the ongoing need and challenges of a short supply of truck parking within the state and throughout the nation. According to Caltrans' recently released California Statewide Truck Parking Study which identified where additional truck parking is needed, there is a statewide deficit of 3,404 truck parking spaces during peak demand hours.¹⁵ California will be challenged to simultaneously build out its truck parking supply to meet demand while building a network of EV chargers for large vehicles. A CEC analysis completed in support of the state's climate and air quality goals under Executive Order N-79-20 concluded that California could have as many as 180,000 zero-emission medium-duty and heavy-duty trucks on the roadways by 2030.¹⁶ To prepare for these trucks, the California Statewide Truck Parking Study also includes design considerations to support EV charging and fueling strategies from the outset of private or public truck parking lot construction.

Additionally, in some parts of rural California there is limited access to adequate electrical infrastructure needed to establish charging facilities for medium- and heavy-duty vehicles. One strategy to address the lack of electrical infrastructure in rural areas is including solar infrastructure in the design of the facility. On-site solar generation and

¹⁵ Caltrans. California Statewide Truck Parking Study. Retrieved from <https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/freight-planning/plan-accordion/catrkpkgstdy-finalreport-a11y.pdf>

¹⁶ California Energy Commission (2021). Assembly Bill 217 Electric Vehicle Charging Infrastructure Assessment Analyzing Charging Needs to Support ZEVs in 2030.

stationary battery storage provide an opportunity for additional energy production at parking areas, with the ability to lessen demands on the grid. There are current projects testing the deployment of solar panels to support EVSE to support zero-emission trucks.¹⁷ The first solar-powered truck stop in the United States for heavy-duty electric trucks is expected to open late October 2022 in Bakersfield, California.¹⁸

AFC - Corridor Networks

A total of 17 California corridors received Corridor-Pending EV Alternative Fuel Corridor designations in the 2022 Round 6 Request for Nominations. California continues to make significant progress building critical infrastructure along Interstates and State Routes. Nomination of these routes will allow for future expansion to increase clean transportation in support of air quality and climate goals.

California's success to date, and future plans to further develop the state's zero-emission vehicle infrastructure, rely on a robust and diverse network of stakeholders. Caltrans coordinated the nominations with Metropolitan Planning Organizations, Rural Transportation Planning Agencies, and local city and county governments throughout the state. The Governor's Office of Business and Economic Development also reached out for input from the Clean Cities Coalitions.

The Round 6 nominations placed emphasis on the rural, disadvantaged, and tribal areas within California. Nearly all the AFC corridors are in or adjacent to disadvantaged communities as determined by CalEnviroScreen and the Justice40 Initiative.^{19 20}

Designating EV AFCs supports future charging infrastructure and adoption of EVs. With an extensive intra- and inter-state network, consumers and businesses are likely to feel confident that they can fuel their vehicles both within and outside of their home and work communities.

¹⁷ North American Council for Freight Efficiency (2019). Amping Up: Charging Infrastructure for Electric Trucks.

¹⁸ <https://www.truckinginfo.com/10150943/solar-powered-truckstop-for-electric-truck-charging-to-break-ground-this-fall>

¹⁹ CalEnviroScreen, an analytical tool created by the California Environmental Protection Agency (CalEPA), combines different types of census tract-specific information into a score to determine which communities are the most burdened or "disadvantaged."

²⁰ Electric Vehicle Charging Justice40 Map displays US Department of Energy/US Department of Transportation guidance disadvantaged communities.

Figure 2: Designated and Round 6 Alternative Fuel Corridors for Electric Vehicles



Round 6 Designations – EV Corridor Pending

Corridor	Miles	Start	End
SR-4	44	Hercules (I-80)	Brentwood
SR-4	55	Port of Stockton Expressway	Angels Camp (SR-49)
SR-7	7	Holtville (I-8)	Calexico (SR-98)
SR-17	27	San Jose	Santa Cruz (I-280/I-880 interchange)
SR-20	21	Ukiah (US-101)	Upper Lake (SR-29)
SR-20	143	Clearlake Oaks (SR-53)	Emigrant Gap (I-80)
SR-23	32	Moorpark (SR-118)	Thousand Oaks (US 101)
SR-24	16	Oakland (I-980)	Walnut Creek (I-680)
SR-29	31	Lower Lake (SR-53)	Upper Lake (SR-20)
SR-55	18	Anaheim	Newport Beach
SR-67	7	El Cajon (I-8)	Eucalyptus Hills (NHS terminus)
SR-94	37	San Diego (I-5)	Tecate Rd (SR-188)
SR-118	46	Saticoy (near Oxnard)	San Fernando
SR-125	22	Otay Mesa (SR-905)	Santee (SR-52)
SR-180	58	Fresno (SR-99)	Junction SR-245
SR-198	89	Coalinga (I-5)	Sequoia National Park
SR-199	36	Crescent City (US 101)	CA/OR Border
US-97	54	CA/OR Border	Weed (I-5)
US-395	203	CA/OR Border	CA/NV Border

Rounds 1 -5 Designations – EV Corridor Pending Corridors

Corridor	Miles	Start	End
I-10	100	Indio	CA/AZ border
I-15	101	Yermo	Border CA/NV
I-210/SR-210	17	Sylmar (I-210/I-5 interchange)	Glendale (Pennsylvania Ave. exit 17)
I-40	144	Barstow	CA/AZ border
I-5	67	Colinga	Buttonwillow
I-8	154	El Cajon	CA/AZ border
SR-1	294	Fort Bragg	Monterey
SR-1	315	Camino Capistrano (@ I-5); Monterey	San Simeon
SR-111/SR-78/SR-86	12	White Water	Palm Springs
SR-120	162	Lathrop (intersection w/ I-5)	Lee Vining (intersection w/ US-395)

SR-14	5	Sylmar (start at intersection of SR-14 and I-5); Lancaster	Santa Clarita; Inyokern (end at intersection of SR-14 and US-395)
SR-152	102	Watsonville	Chowchilla
SR-299	100	Arcata	Douglas City
SR-41	150	Fish Camp	Shandon
SR-46	88	Paso Robles	McFarland
SR-58	71	SR-58/SR-14 interchange in Mojave	SR-58/I-5 interchange in Barstow
SR-905	9	CA/Mexico border	San Diego CA (at intersection with I-5)
US-101	46	Ukiah; Trinidad	Garberville; CA/OR Border
US-101	42	Trinidad	Klamath
US-395	352	Topaz	Hesperia

Rounds 1-5 Designations – EV Corridor Ready Corridors

Corridor	Miles	Start	End
I-10	142	Santa Monica	Indio
I-105	21	El Segundo (California Street)	Norwalk (I-105/I-605 interchange)
I-110	24	Los Angeles (1230 W 3rd St)	San Pedro (I-110/SR-47 interchange)
I-15	187	San Diego (@start of I-15)	Yermo
I-205	13	Tracy (@ I-580)	Tracy (@I-5)
I-210/SR-210	69	Glendale (Pennsylvania Ave. exit 17)	Redlands (at SR-210/I-10 interchange)
I-215	45	San Bernardino	Murrieta
I-280	57	San Francisco (5th and King St)	San Jose (@ I-680)
I-405	62	Mission Hills (@ I-5)	Irvine (@ I-5)
I-5	470	CA/OR border	Colinga
I-5	260	Buttonwillow	CA/Mexico Border
I-505	39	Dunnigan (I-505/I-5 split)	Vacaville (I-505/I-80 interchange)
I-580	73	San Rafael (@ US 101)	Tracy (@I-5)
I-605	34	Duarte (I-605/I-210 interchange)	Seal Beach (I-605/I-405 interchange)
I-680	73	Cordelia	San Jose (@ I-280)
I-710	23	Los Angeles (@ E. Valley Rd)	Long Beach
I-8	17	San Diego	El Cajon
I-80	206	San Francisco	Cisco Grove

I-805	28	San Diego (I-805/I-5 split in Sorrento Valley)	San Diego (I-805/I-5 split interchange in San Ysidro)
I-880	45	San Jose (@ I-280)	Oakland (@I-80)
SR-111/SR-78/SR-86	40	Palm Springs	Coachella
SR-12	104	Sebastopol (at intersection of SR-12/SR-116)	Lodi (SR-12/SR-99 interchange)
SR-14	43	Santa Clarita	Lancaster
SR-299	39	Douglas City	Redding
SR-39	21	La Habra (at intersection of SR-39/SR-72)	Huntington Beach (at intersection of SR-39/SR-1)
SR-58	85	Buttonwillow (at the intersection of I-5)	Mojave (SR-58/SR-14 interchange)
SR-60	78	Los Angeles (start @ I-10/I-5 interchange)	Beaumont (end @ I-10)
SR-78	17	Oceanside (at intersection of SR-78/I-5)	Escondido (at the intersection of SR-78/I-15)
SR-91	60	Gardena (SR-91/I-110 interchange)	Riverside (SR-91/I-215 interchange)
SR-99	425	Red Bluff	Wheeler Ridge
US-101	521	Los Angeles (starting @ I-10/I-5 interchange); Garberville	Ukiah; Trinidad
US-50	106	West Sacramento	South Lake Tahoe

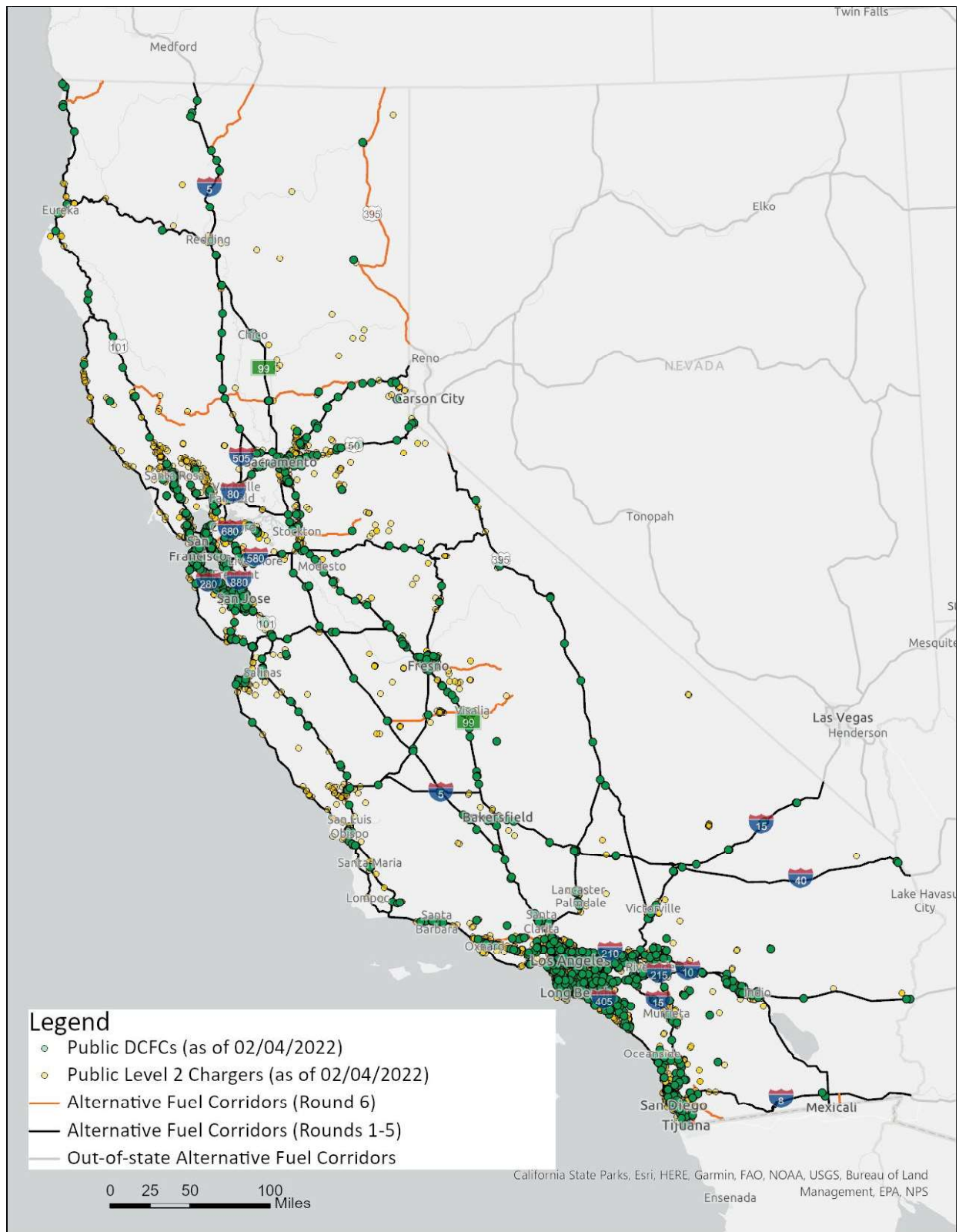
Existing Locations of Charging Infrastructure Along AFCs

The US Department of Energy's Alternative Fuels Data Center (AFDC) provides information on EV charging, including station location, port counts, connector types, and network providers. The complete table of existing locations of public charging infrastructure along AFCs can be downloaded from the AFDC. Figure 3 summarizes this data by displaying locations of existing public DCFC and Level 2 charging stations along electric corridors. As of February 2022, California has 1,581 public DCFC stations (6,764 DCFCs) and 12,568 public Level 2 stations (28,877 Level 2 chargers).^{21 22}

²¹ U.S. Department of Energy Alternative Fuels Data Center, available at <https://afdc.energy.gov/>.

²² A station location is a site with one or more EVSE ports (i.e., chargers) at the same address. An EVSE port (or charger) provides power to charge only one vehicle at a time even though it may have multiple connectors.

Figure 3: Alternative Fuel Corridors and Existing Public DCFC and Level 2 Chargers in California



Source: U.S. Department of Energy Alternative Fuels Station Locator

Known Risks and Challenges

As with any new program, there are challenges and risks associated with the NEVI Program and its deployment. California identified known risks and challenges to mitigate and plan for their impact.

One set of challenges is associated with the business model for deploying infrastructure, especially in advance of vehicle adoption. Utilization rates, especially early on, may not be high enough to provide a return on investment for EV charging service providers.²³ To mitigate this, public funding, including the NEVI funding, is essential to bridging this gap; grant applicants will be incentivized by the evaluation criteria to minimize the amount of public funding applicants request. Other amenities and services which provide revenue for the site host may be necessary, similar to a gas station business model with a co-sited market, restaurant, or restrooms.

Uncertainties in the application process may mean that a successful applicant is not able to complete the project under the terms it submits. In particular, this is a higher risk in an economic environment with high inflation, as seen in 2021 and the first half of 2022. It is also a risk that chargers are not operated beyond the required term of the agreement if utilization is not high enough. These risks are higher in areas with lower population density and travel demand. California's proposed Advanced Clean Cars II regulations would result in a rapid increase in adoption of EV but risks and uncertainties about the role and utilization levels of DCFC and long-distance travel remain.²⁴

Associated with the utilization risk is a set of challenges for public awareness of chargers. In most cases, we expect that the stations funded under NEVI will require partnerships between site hosts and charging providers. Site hosts' willingness to participate will depend on their awareness of the benefits and challenges of hosting EV charging infrastructure, and their calculation of the future benefits and opportunity costs. EV service providers report spending significant time and resources in recruitment and education of potential site hosts. This presents an execution risk that may be higher in less-developed areas where there are fewer eligible properties to begin with. To mitigate this risk, organizations like Veloz are working to increase public awareness.²⁵

A second set of challenges is associated with elements of charger installation. These include supply chain challenges, permitting, utility interconnection, and a trained and available workforce. Anecdotal evidence suggests that supply chain challenges, common in many parts of the economy, are delaying delivery of EVSE. As installation of charging stations increases around the country, under NEVI and other programs, supply chain disruptions and shortages of EVSE and EVSE components could delay installation.

EVSE installations will also be required to receive construction permits from local governments, which is sometimes a lengthy process. Further, the process and timing can vary greatly from jurisdiction to jurisdiction. To mitigate this risk, all cities and

²³ <https://www.npr.org/transcripts/940172037>

²⁴ <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/advanced-clean-cars-ii>

²⁵ <https://www.veloz.org/>

counties in California are required by law to streamline permitting processes for EV charging stations and limit project review to health and safety requirements in an expedited timeframe. Further information regarding permit streamlining is described in the State, Regional, and Local Policy section.

Deployment of ZEV infrastructure has experienced slowdowns due to utility interconnection and energization. Electrify America has identified utility interconnection costs and timelines as a barrier to DCFC deployment, stating that as of the end of the third quarter of 2021, the new service utility interconnections averaged nearly nine months in California. EVgo noted bottlenecks in interconnections have delayed projects from six months to a year. EVgo notes that Southern California Edison's interconnection procedures have evolved and include clear application requirements, predictable timelines, and access to the utility's authorities when clarifications are needed. To mitigate this risk, in the resolutions approving the investor-owned utilities' (IOUs) Electric Vehicle Infrastructure Rules, the CPUC directed the IOUs to host a public workshop to discuss the barriers to timely EV charging service energization. Following the workshop, the IOUs are to propose an average timeline for EV charging interconnection of between 90 and 160 days.

California is committed to workforce development to help the transition to electric transportation, as described elsewhere in this plan. Including NEVI funding, the State of California is proposing about \$3 billion in ZEV infrastructure over 5 years, with another approximately \$1 billion proposed in funding from utilities regulated by the California Public Utilities Commission. This requires a rapid scaling of a trained and certified workforce to install, service, permit and inspect, or interconnect and energize EVSE. Under California law (Assembly Bill 841, 2020), EVSE located on the customer side of the electrical meter that is funded or authorized by specified state entities shall be installed by a contractor with the appropriate license and by electricians who are Electric Vehicle Infrastructure Training Program (EVITP) trained and certified. As described in the Contracting section, the CEC will develop agreements with grant recipients, and the requirements of AB 841 would thus apply to NEVI-funded projects.

According to California State Association of Electrical Workers and Coalition of California Utility Employees, the number of EVITP-certified electricians in California is approximately 2300 as of mid-2022. Training and, as of mid-2022, testing, are currently available online which should facilitate further growth in the number of EVITP-certified electricians. . However, the adequacy of the number of many critical occupations in this workforce sector, including licensed electricians/electrical contractors and EVITP trained- and certified workforce, to meeting the rapid increase in demand from publicly- and privately-funded installations remains uncertain. To mitigate risks of having too few available EVITP certified electricians, the CEC is contracting with the community college system to expand the locations for in-person examinations to improve access to communities outside of the San Francisco Bay Area and Los Angeles area.

Finally, reliability of the EVSE network and of stations has been identified as an increasing concern, especially as the vehicle market grows beyond early adopters to mainstream consumers. To mitigate this risk, as discussed elsewhere, the CEC is

investigating how to track and measure the reliability of stations over time. The CEC intends to develop and publish reliability standards to increase uniformity and transparency. Any standards for NEVI-funded projects will conform to the regulations resulting from the proposed rulemaking by the Federal Highway Administration issued on June 22, 2022, and standards for state-funded projects will also be developed with consistency with federal standards in mind. Consumer-facing apps and websites like PlugShare, market surveys and studies, and automakers' in-car navigation provide additional information.^{26 27}

EV Charging Infrastructure Deployment

The overarching strategy for EV charging infrastructure installations is to run a competitive GFO for applicants to propose projects to acquire, install, own, operate, and maintain EV chargers at stations that meet the NEVI requirements. California anticipates dividing the AFCs into segments based on geography, station size, and other attributes. For each segment, a grant will be awarded based on evaluation of the applications for that segment.

For the initial funding, California will prioritize segments that have infrastructure gaps. In future years, the segments would be re-evaluated and potentially re-ranked for one or more subsequent GFOs. Over time, the CEC and Caltrans plan to use the NEVI funding to develop an interconnected network of stations that meet or exceed NEVI standards along all designated corridors and connect to neighboring states.

Funding Sources

In recognition that grant recipients will own and have the ability to receive revenue from the chargers, we anticipate that those recipients will provide a cost share that will cover at least the non-federal share of 20 percent of project costs. An evaluation criterion of minimizing public funding will incentivize applicants to provide higher cost shares, as well as to lower overall costs.

Previous successful GFOs and block grants executed by the CEC have offered DCFC funding with a required "match" share by the recipient. California anticipates that successful applicants for NEVI funding will provide at least the 20 percent cost-share required, from private funding and/or stacked incentives from utility or local government programs. If necessary to meet NEVI spacing requirements, the state will consider, in limited cases, providing cost-share from state funding.

²⁶ PlugShare Website: <https://www.plugshare.com/>

²⁷ J.D. Power. August 18, 2021. "Public Charging Experience for Electric Vehicle Owners Can Get Much Better, J.D. Power Finds." <https://www.jdpower.com/business/press-releases/2021-us-electric-vehicle-experience-evx-public-charging-study>; Umlaut. January 31, 2022. "US EV Charging Infrastructure – How Fast and How Convenient?" <https://www.umlaut.com/en/stories/us-ev-charging-infrastructure-how-fast-and-how-convenient>.

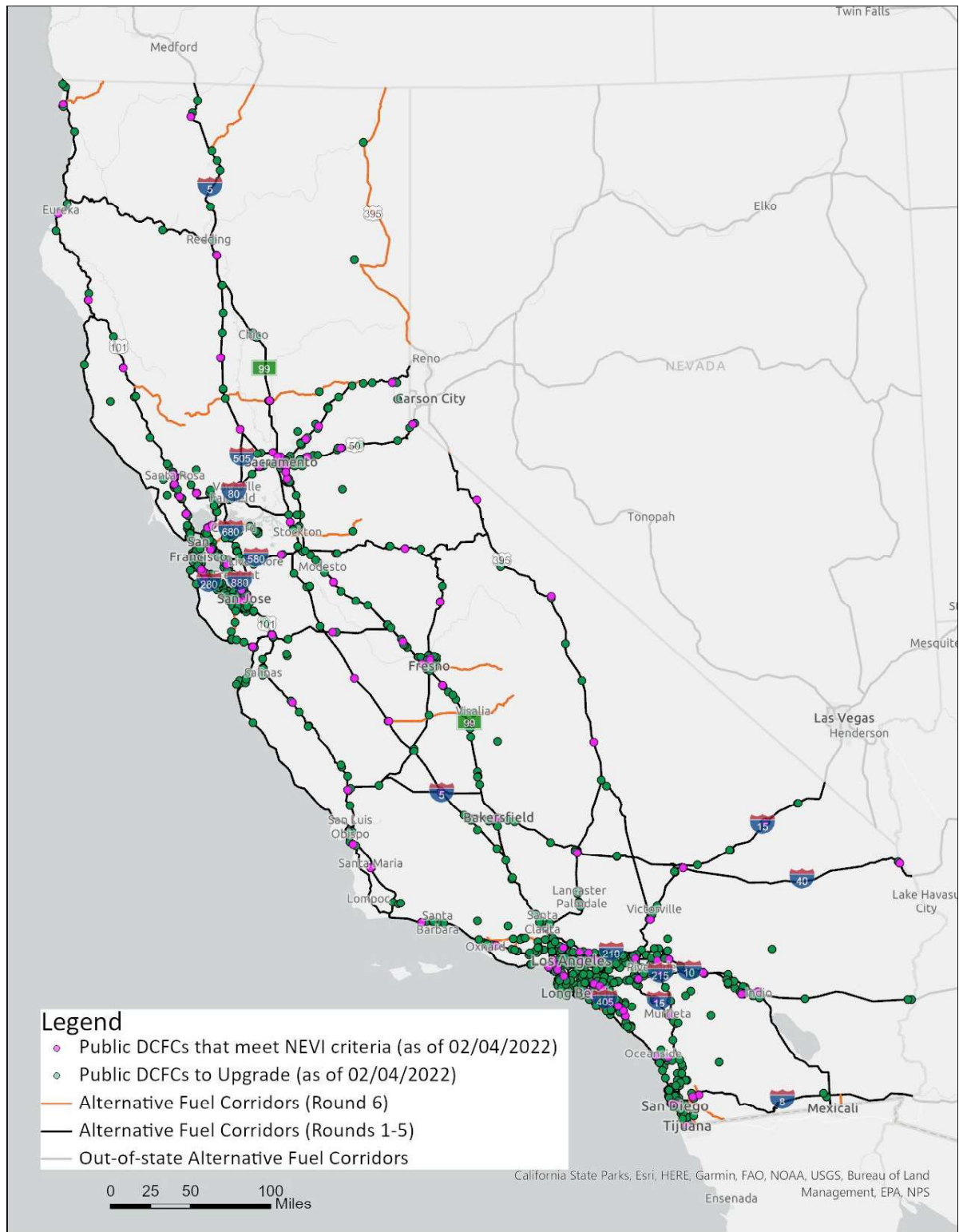
2022 Infrastructure Deployments/Upgrades

As described previously, California will divide the AFCs into segments based on an analysis of gaps in the current network, future charger needs, and geography. The gap analysis will begin with a review of existing infrastructure. During this analysis, California will also establish a criterion for determining if more than 4 charging ports are needed to fill the gap in infrastructure and if the gap location would benefit from chargers with power beyond 150kW per port.

Figure 4 shows the locations of existing public DCFCs as of February 2022. Stations in purple meet the NEVI Formula Program standards: they are located less than 1 mile from an electric corridor exit, have a minimum of four CCS type 1 ports with a maximum charging power per port of at least 150 kW, and site power capacity of no less than 600 kW. As of February 2022, California has a total of 113 stations (592 DCFCs) that meet the NEVI Formula Program criteria.

Locations of proposed new installations should be no more than 50 miles from stations that meet the NEVI Formula Program standards and 1 mile from the corridor exit. Stations in green are the remaining public DCFCs in California (1,468 stations, 6,172 DCFCs) that do not meet the NEVI Program standards.

Figure 4: Existing DCFC Along Alternative Fuel Corridors



Source: U.S. Department of Energy Alternative Fuels Station Locator

Current DCFC deployment locations that meet NEVI Formula Program standards along electric corridors will inform the approximate locations of proposed new station installations. Figure 5 displays AFC Rounds 1 – 6 electric corridors with DCFC stations that meet NEVI standards marked with yellow circles. “NEVI built-out” corridors sections are highlighted in blue. The gaps in DCFC infrastructure will be targeted as approximate locations for future stations funded through the NEVI Formula Program.

Figure 5: NEVI Built-Out Corridors and Gaps



Source: U.S. Department of Energy Alternative Fuels Data Center

Upgrades of Corridor Pending Designations to Corridor Ready Designations

California has 55 corridors currently designated for electricity as an AFC from the first six rounds of AFC Nominations. The designated corridors consist of 19 Interstates, 32 State Routes, and 4 US Routes covering nearly 6,600 miles in California.

Table 2: Rounds 1 – 6 Alternative Fuel Corridors (AFC) for Electric Vehicles*

Corridor Type	Corridors
Interstate (I)	I-5, I-8, I-10, I-15, I-40, I-80, I-105, I-110, I-205, I-210, I-215, I-280, I-405, I-505, I-580, I-605, I-680, I-710, I-805, I-880
State Route (SR)	SR-1, SR-4, SR-7, SR-12, SR-14, SR-17, SR-20, SR-23, SR-24, SR-29, SR-39, SR-41, SR-55, SR-58, SR-60, SR-67, SR-78, SR-86, SR-91, SR-94, SR-99, SR-111, SR-118, SR-120, SR-125, SR-152, SR-180, SR-198, SR-199, SR-210, SR-299, SR-905
US Route	US-50, US-97, US-101, US-395

* Portions of the corridor may be undesignated

California continues to make progress building critical infrastructure along Interstate and State Routes to allow for inter- and intra-regional travel. The previous rounds of designations required public DCFCs less than 50 miles apart, within 5 miles from the corridor exit, and having both CHAdeMO and Combined Charging System (CCS) connectors. The updated requirements led to additional analysis to determine which designated corridor segments meet the NEVI built-out requirements. The current analysis assumes that built-out corridor segments must have DCFC charging stations within one mile of each endpoint, stations less than 50 miles apart, and DCFCs meeting the NEVI criteria. The initial analysis indicates that most built-out corridor segments are in urbanized areas, such as the San Francisco Bay Area, Sacramento, Los Angeles, and San Diego region.

For the initial funding, California will prioritize segments that have infrastructure gaps, i.e., that do not meet the requirements for “Corridor Ready.” Over time, California will utilize NEVI funding to develop an interconnected network of stations that meet or exceed NEVI standards along all designated corridors and connecting to neighboring states.

A ranking process will be developed to prioritize corridors to focus DCFC deployments to convert corridors from pending, or ready under a previous definition, to “NEVI built-out” in a cost-effective and efficient manner. Criteria under consideration for prioritization of corridors include, but are not limited to, the items listed below. Additional stakeholder outreach and a public workshop will help refine the criteria.

- **Corridor type:** The NEVI Formula Program Guidance includes guidance that “States should first prioritize investments along the Interstate Highway System.” With the exception of a few short connectors, nearly all of California’s interstates are designated for AFC electricity. However, due to changes in the AFC criteria, the majority of the Interstate Corridors have gaps.
- **Equity:** As part of the NEVI Guidance, states must target at least 40 percent of the benefits towards disadvantaged communities as identified by the EV Charging Justice⁴⁰ Mapping Tool. The CEC’s goal is to provide more than 50 percent of Clean Transportation Program funds towards projects that benefit low-income and disadvantaged communities.

- **Traffic and/or projected demand for corridor charging:** California will utilize two data sources to determine traffic and projected demand for EV charging within a corridor. Traffic counts indicating 2019 (pre-COVID) annual average daily traffic counts (AADT) will be used to rank the corridor segments. Due to the seasonality of some routes, traffic counts may be analyzed using the highest traffic or peak month of the year for the segment which may be more representative of the traffic conditions than the Annual ADT (total volume for the year divided by 365 days). The EVI-Road Trip model uses AADT to project the number and locations of DCFCs needed to enable electrified road trips from EVs of 100 miles or more. Combining the EVI-Road Trip model with traffic count data allows a corridor to be ranked by traffic and/or projected demand for DCFC.
- **Existing/planned DCFC efforts:** In addition to public funding, the private sector, local air districts, and electric utilities in California are investing in public charging station installations. The state will focus efforts where other entities may not be willing to invest in deploying DCFC, such as harder to reach rural corridors and areas where bringing electricity to a site may be difficult.
- **Permit Streamlining:** Sites within jurisdictions that have implemented permit streamlining for EV stations, as described in the State, Regional, and Local Policy section, will offer efficiency and time savings.

The number of built-out AFC corridors will be dependent on requirements in the solicitation and proposals received and awarded.

Increases of Capacity/Redundancy along Existing AFC

California has hundreds of DCFC stations located along highways built before the NEVI requirements were introduced. These sites may serve as prime locations and critical sites to be upgraded as part of the deployment plan. As part of two previous programs, DCFC corridor sites funded by the CEC were mandated to install stub-outs, ready-to-go infrastructure for additional chargers. The requirement specified that all conduit ran for the charging stations must be sized to accommodate chargers of 150 kW or larger. Although utility transformers and supporting equipment may need to be upgraded, additional trenching would not be required to add or replace existing chargers with higher-powered chargers. Additionally, the amount of time required for planning, design/engineering, and permitting will also be reduced. Building stub-outs can lead to substantial decreases in costs and time.

Electric Vehicle Freight Considerations

In October 2021, California's Governor Newsom signed SB 671 to establish the Clean Freight Corridor Efficiency Assessment. The bill requires the CTC to identify freight corridors, or segments of corridors, as priority candidates for the deployment of zero-emission medium- and heavy-duty vehicles by December 2023. The assessment's findings and recommendations will be incorporated into the California Transportation Plan. Subsequently, the California Freight Mobility Plan will include a description of

needed infrastructure, projects, and operations needed to develop the freight corridors identified in the assessment.

The SB 671 effort includes both public and private sector stakeholders including the following:

- Academia
- California Air Resources Board (CARB)
- California Department of Transportation (Caltrans)
- California Energy Commission (CEC)
- California Public Utilities Commission (CPUC)
- Environmental organizations
- Freight industry (i.e., trucking firms, ports, distributors)
- Governor's Office of Business and Economic Development (GO-Biz)
- Local governments
- Metropolitan planning organizations,
- Public health representatives
- Regional transportation planning agencies
- Stakeholders from low-income and disadvantaged communities

In February 2022, the stakeholders identified priority corridors throughout the state. The priority corridors identified, not surprisingly, aligned with the Alternative Fuel Corridors nominated in Rounds 1 – 5. Thus, indicating that the corridors that are most important for goods movement are amongst those that are a priority for all types of travel.

Public Transportation Considerations

The majority of EV charging for public transportation fleets in urban settings will most likely be conducted at the agency's bus depot or yards. However, in rural areas where bus routes are longer, these fleets may find it advantageous to utilize public DCFC that are near turn around points at the ends of routes. Publicly accessible DCFC could allow transit drivers to add range to the vehicle while they take a lunch or stretch break.

Public transportation fleets are an important part of emergency evacuation planning. As such, back up batteries and solar power generation should be considered, as appropriate. In areas prone to wildfire, electricity service providers find it necessary to shut down power during high wind events to prevent fires caused by downed power lines. The rural areas need reliable charging infrastructure to enable emergency response by the public transportation fleets.

Fiscal Year 2023-26 Infrastructure Deployments

California's proposed structure for the deployment plan is intended to be durable and flexible to achieve the goals of the NEVI program with future years' funding. While the structure will likely remain stable, the state needs may evolve. In future annual deployment plans, California will reassess the proposed uses of NEVI funds, including infrastructure that primarily serves light or medium- and heavy-duty vehicles, within the

requirements of the NEVI program and in the context of California's overall funding and deployment strategy. In each year of the program, California will revisit the segment definitions, charging needs, and rankings; and evaluate equity needs, deployment, station utilization along with complementary investments from the private sector, electric utilities, and other public funding programs. Market and technology developments, and forecasts for both vehicles and charging infrastructure, will be reviewed in conjunction with stakeholder input and other information. It is anticipated that the first grant funding opportunities will utilize the first two years of NEVI funding due to the timing of the deployment plan approval process.

If the NEVI funding, in combination with other investments, is sufficient to build out California's corridors, the state will propose other uses for the funding, such as increasing capacity near demand centers, or increasing corridor charging capacity by adding or upgrading chargers and stations to provide additional equity, capacity, and redundancy.

State, Regional, and Local Policy

California currently has two existing permit streamlining laws for EV charging infrastructure. The intention of these laws is to make the permitting process for EV stations consistent and expedient across California. [Assembly Bill 1236](#) (Chiu, 2015), mandates that all California cities and counties adopt ordinance to expedite the permitting process for new EV charging stations and provide a checklist to applicants. [AB 970](#) (McCarty, 2021) builds on this legislation and codifies specific timelines for the permitting process.

To assist cities in implementing these laws, the Governor's Office of Business and Economic Development (GO-Biz) developed a permitting guidebook, [Fact Sheet](#), permitting [Scorecard](#), and a [Frequently Asked Questions Page](#). GO-Biz is in the process of updating the [Electric Vehicle Charging Station Permitting Guidebook](#) to reflect the evolving landscape of EV charging equipment.

GO-Biz also manages an [EV Charging Station Permit Streamlining Map](#) to create a shared understanding of EV charging station permit streamlining across the state and track compliance with California laws AB 1236 and AB 970. The objective of the map is to allow communities to use these tools to easily replicate success, leverage lessons learned, and save time as we all work to aggressively build out California's ZEV infrastructure network.

California's existing EV permit streamlining laws provide a strong foundation to further build out EV infrastructure in the state. GO-Biz is in regular communication with EV charging stakeholders, private/public companies, cities/counties, and utility providers. As of May 1, 2022, California had 190 jurisdictions with streamlined permitting, 128 jurisdictions in the process of streamlining, and 222 jurisdictions that need to adopt the legislation.

The funding available through NEVI should serve to further advance permit streamlining efforts across the state. GO-Biz will utilize existing resources and communication networks to best prepare jurisdictions to receive NEVI funds and build out EV

infrastructure. To expediate the completion of the projections funded through NEVI, California may give funding priority to jurisdictions that are fully streamlined or have started the streamlining process.

Implementation

The CEC has studied EV charging infrastructure reliability since summer of 2021. These efforts have revealed anecdotal evidence that indicate a shortcoming in the overall reliability of EV charging infrastructure throughout California. This negatively impacts the overall user experience for EV drivers and is a barrier to EV adoption. It is imperative that reliability is maintained.

CEC staff, in collaboration with Caltrans, CPUC, and CARB, are investigating and developing mechanisms to ensure the reliability of publicly funded chargers. Broadly speaking, these are likely to include maintenance, recordkeeping, and reporting requirements that all funding recipients must agree to meet as a condition of funding. These requirements will be included in NEVI funding agreements to ensure that the minimum 97 percent uptime requirement is met. Additional standards for NEVI-funded projects will conform to any regulations resulting from the proposed rulemaking by the Federal Highway Administration issued on June 22, 2022.

The CEC, CPUC, and others are collaborating to make sure that EV chargers are “good citizens of the electric grid.” Analysis suggests the state will be able to handle millions of EVs in the near term. At the same time, studies highlight the importance of thoughtful electrical distribution build-out and managed charging strategies. In implementation of NEVI project funding, California expects to explore the role of on-site generation and stationary storage to minimize grid impacts and costs and maximize benefits.

Strategies for EVSE Operations & Maintenance

To comply with proposed NEVI standards, including minimum uptime requirements, California will include those standards in the funding agreements with recipients. CEC and Caltrans also plan to require applicants to provide a detailed Operations & Maintenance (O&M) Plan in their applications, and to meet robust maintenance, recordkeeping, and reporting requirements. We expect that operations and maintenance costs would be eligible expenses for agreements with NEVI funds and are exploring the possibility of provisions that would make funding available only after recipients provide evidence that the chargers operated reliably.

CEC's two most recent light-duty EV charging solicitations, the Rural Electric Vehicle (REV) Charging and the Reliable, Equitable, and Accessible Charging for multi-family Housing (REACH) both required minimum time uptimes of 97 percent for 5 years from the commissioning of charging equipment. California plans to adopt the same requirements for the projects funded through the NEVI program.

Applicants will be required to submit an O&M Plan to demonstrate that the equipment

will be operational at least 97 percent of the time based on the hours of operation. Additionally, the O&M plan will address customer service, site host training, process and timelines for upkeep, and repair turnaround time. California expects most types of malfunctions and repairs to be addressed within 48 hours of the initial notice, and the O&M Plan will outline how this repair time will be achieved. For significant or complex issues leading to downtime (such as vandalism), the equipment should be repaired in 2 – 5 days. The O&M Plan will also identify the party responsible for payment of all operating costs, including but not limited to payment of leases, rents, royalties, licenses, fees, taxes, revenue sharing, utilities, and electric power supply for the charging equipment and supporting elements, such as area lighting.

Additionally, the O&M Plan will address who will be responsible for ensuring the maintenance of the charging station pedestals, and all ancillary equipment, including but not limited to any awnings, canopies, shelters and information display kiosks or signage associated with the charging station. This includes providing all needed repairs or desired and approved alteration, as well as cleaning the equipment and keeping it safe and presentable. California is also collaborating with the charging industry, automakers, standards organizations, community organizations and other stakeholders to develop robust maintenance, recordkeeping, and reporting requirements to enable the verification of uptime, preventative maintenance, corrective maintenance, and interoperability standards are met. Additional standards for NEVI-funded projects will conform to any regulations resulting from the proposed rulemaking by the Federal Highway Administration issued on June 22, 2022.

Strategies for Identifying Electric Vehicle Charger Service Providers and Station Owners

California will conduct research, hold workshops, and meet with EV charger manufacturers and network providers while designing the GFO. This will enable the establishment of requirements for the GFO and help communicate with potential applicants. Notices for the GFO public workshops will be sent using CEC's email lists.

The GFO will establish the minimum requirements for eligible sites. Depending on the proposed business models, potential applicants will be responsible for soliciting interested site hosts or station owners and making sure the site hosts meet the GFO's eligible site requirements. The proposed charging station location will be identified on the application and evaluated on the degree to which it meets or exceeds the GFO's minimum requirements. Ample time will be provided before application due dates to allow applicants to locate potential sites, negotiate with site hosts, and prepare a letter of intent.

Strategies for EVSE Data Collection & Sharing

The CEC frequently requires funding recipients to collect and report utilization and reliability data. Past CALeVIP program participants agreed to supply data through their EVSPs. As a result, the CEC developed a standard list of utilization data that all funding recipients will be required to provide for an agreed upon period following

commissioning.²⁸

As noted in the 'Network Reliability' section below, the CEC is also developing standard data relevant to reliability that funding recipients will be required to report to the CEC. We are exploring unifying both the utilization and reliability data requirements into a single data requirements approach that can be incorporated into all funding agreements. California will include data collection and reporting requirements into agreements with station developers under the NEVI Program.

The data from industry accepted protocols, such as the Open Charge Point Protocol (OCPP), tracks metrics that inform both utilization and charger reliability. The CEC is currently evaluating how data is collected, stored, and transmitted to the CEC; what specific data can or should be required; and whether or how to aggregate and publish this data or resultant analyses.

In parallel, Atlas Public Policy and the Society for Automotive Engineers (SAE) are creating standard data requirements. The CEC is actively engaging with these groups and collaborating to align requirements as much as possible. The long-term goal for these efforts will be a unified set of data to track use and reliability of publicly funded charging infrastructure.

Strategies to Address Resilience, Emergency Evacuation, Snow Removal/Seasonal Needs

Due to varied climate and geography, California has experienced a variety of natural disasters and extreme weather events, including earthquakes, wildfires, flooding, mud slides, and snowstorms. During these events it is important to have charging infrastructure that is reliable in the event of evacuations. A challenge in maintaining reliability in the infrastructure is that the weather events often lead to power and communication outages. Additionally, in recent years, utilities have begun shutting down power during high winds in an effort to prevent fires.

California will look to technology advancements and innovation to provide power during extreme weather events and emergency evacuations. Battery backup and storage, often coupled with solar power, are some of the technologies currently under consideration.

With direction from the CPUC, investor-owned utilities are investigating ways to help EV owners and fleets managers to charge their vehicles during planned or unplanned power outages, including: 1) Improving communication, before and during potential or active de-energization events, about the location and accessibility of charging stations near impacted areas; 2) Investigating the feasibility of grid-independent EV charging stations (e.g., mobile charging stations) which can be used to charge EVs during public safety power shutoffs and other emergency events; 3) Coordinating with EV charging network providers to reinforce EV charging networks with backup generation.

²⁸ <https://calevip.org/>

Additionally, California is looking at opportunities for charging stations to inform drivers of potential disaster events. Earthquake Warning California is the country's first publicly available statewide warning system that could provide crucial seconds to get to safety before any shaking is felt. Managed by the Governor's Office of Emergency Services (Cal OES), Earthquake Warning California uses ground motion sensors from across the state to detect earthquakes before humans can feel them and can notify Californians to "Drop, Cover and Hold On" in advance of an earthquake. The earthquake warnings are currently available through a download of the MyShake App. California is looking into ways to incorporate the warning system into charging stations to warn drivers to move away from structures such as signs or solar canopies that could cause them harm during an earthquake.

Strategies to Promote Strong Labor, Safety, Training, and Installation Standards

Workforce Training & Safety

California has cultivated and developed strong partnerships with the crafts and trades associated with transportation electrification, broadly, and with EVSE installations, specifically. The state will continue to work with these partners to establish a strong labor force of trained individuals to support and enhance the industry. Specific partnerships with the EVSE workforce and labor include those with the National Electrical Contractors Association (NECA), the International Brotherhood of Electrical Workers (IBEW), and Jobs to Move America (JMA). State workforce agency partners that support labor, apprenticeships, and training, for EVSE installation, service, and replacement include the California Workforce Development Board (CWDB), the California Employment Training Panel (ETP), the California Community Colleges, the Division of Apprenticeship Standards in the Department of Industrial Relations, and the California Conservation Corps.

The state also has strong regional and local labor and workforce partners such as the Kern County Electrical Joint Apprenticeship Training Committee, regional workforce development boards, local workforce investment boards, and municipal partners like the County of Los Angeles Workforce Development, Aging, and Community Services Department. Through its Clean Transportation Program, the CEC expects to continue investments in EVSE workforce training and development programs to align with EVSE workforce supply and demand. Many existing apprenticeship and pre-apprenticeship programs in AFC-adjacent communities can be leveraged to transform and train a new EVSE workforce. The state's community colleges and universities are also an important partner in worker education and training for the requisite skills needed for project delivery especially in underrepresented communities.

Previous CEC solicitations for ZEV and EVSE funding opportunities have required applicants to include EVSE Workforce Plans.^{29, 30} The EVSE Workforce Plans were subject to a scoring criterion that included responses to criteria/areas such as job creation and

²⁹ <https://www.energy.ca.gov/solicitations/2020-11/gfo-20-606-zero-emission-drillage-truck-and-infrastructure-pilot-project>

³⁰ <https://www.energy.ca.gov/solicitations/2022-03/gfo-21-605-zero-emission-transportation-manufacturing>

recruitment, training and upward mobility, safe workplace conditions, workforce engagement, workforce accessibility to jobs, pay/prevaling wages, supplier diversity, and benefits. Additionally, the CEC launched the IDEAL ZEV Workforce Pilot Project. The project provided funding for community-based solutions in underserved communities that includes EVSE workforce training and development across the state including 23 tribal communities. California is considering including similar requirements in the grant funding opportunity for NEVI funding.

Opportunities for Small Business

The state will engage with rural and small businesses across the EVSE supply chain through existing channels such as through the Rural County Task Force (RCTF), the Rural County Representatives of California (RCRC), the California Association for Local Economic Development (CALED), and through the EVSE industry. Outreach to rural and small businesses will also include communications and targeted meetings across the EVSE supply chains.

Civil Rights

Title VI of the Civil Rights Act of 1964 prohibits discrimination on basis of race, color, national origin, sex, age, and disability in connection with programs or activities receiving federal financial assistance from the United States Department of Transportation, Federal Highway Administration and/or Federal Transit Administration. These prohibitions extend to Caltrans as a direct recipient of financial assistance and to its sub recipients, including the CEC.

California seeks to provide early, meaningful, and inclusive opportunities for involvement by all affected parties: citizens, partner agencies, businesses, industries, Native American tribal governments, organizations, advocates, and disadvantaged and traditionally under-represented communities, including limited-English proficient individuals, people of color, and low-income residents. Engagement for the deployment plan includes information sharing, discussions regarding project alternatives, and input and feedback.

In alignment with Title VI, California is dedicated to increasing the participation of Small Business ,Disadvantaged Business Enterprise (DBE), and Disabled Veteran Business Enterprise (DVBE) firms. DBEs are for-profit small businesses where socially and economically disadvantaged individuals own at least a 51 percent interest and also control management and daily business operations. African Americans, Hispanics, Native Americans, Asian-Pacific and Subcontinent Asian Americans, and women are presumed to be socially and economically disadvantaged. Other individuals can also qualify as socially and economically disadvantaged on a case-by-case basis. The definition of a small business varies by industry.

The DBE program is designed to remedy ongoing discrimination and the continuing effects of past discrimination in federally assisted transportation. The primary remedial goal and objective of the DBE program is to level the playing field by providing small

businesses owned and controlled by socially and economically disadvantaged individuals a fair opportunity to compete for federally funded transportation contracts.

If EV chargers are available for use by the general public, the chargers must be accessible to individuals with disabilities. California's American Disabilities ACT (ADA) Compliance Standards for EV Charging Stations is primarily governed by California Building Code³¹. The building code sets a minimum number of van and standard accessible spaces given the total number of chargers at a facility. The building codes also specify the requirements for an accessible path of travel to and from the charger, configurations for parking spaces, and EV charger requirements. All chargers and charging cords must comply with reach range and operable parts requirements.

Equity Considerations

To address racial equity and the climate crisis, the Justice40 Initiative sets the goal of delivering 40 percent of overall federal investment benefits in climate and clean energy, including sustainable transportation, to disadvantaged communities, including federally recognized Tribal Nations and U.S. Territories.³² The California Energy Commission's Clean Transportation Program seeks to provide more than 50 percent of program funds towards projects that benefit disadvantaged and low-income communities, including Tribal land.

As described in more detail in the "Upgrades of Corridor Pending Designations to Corridor Ready Designations" subsection of the "EV Charging Infrastructure Deployment" section, Caltrans and the CEC plan to use NEVI Program funding, especially in the initial years, to prioritize corridor charging that is in and/or serves low-income and disadvantaged communities, including Tribes and rural communities. At least 50 percent of the NEVI funding will be utilized for projects within California designated disadvantaged communities and/or low-income communities. California will ensure that in doing so, a minimum of 40 percent of the NEVI funding will be utilized in disadvantaged communities designated under Justice40. This will be accomplished through the ranking of corridor segments. Where feasible, requirements for individual segments will include a minimum amount of funding be spent in designated communities.

Identification and Outreach to Disadvantaged Communities (DACs) in the State

For the purposes of the NEVI program, the Joint Office of Energy and Transportation developed an interim definition of disadvantaged communities in alignment with the Justice40 Interim Guidance. This definition of disadvantaged communities includes communities that experience health, transportation access, and energy burdens, with economies highly dependent on fossil energy sources, and exposure to environmental

³¹ https://calevip.org/sites/default/files/docs/calevip/California_EVCS_Regulations_Guide.pdf

³² <https://www.anl.gov/es/electric-vehicle-charging-equity-considerations> April 13, 2022

and climate hazards. Federally recognized Tribal Nations and U.S. Territories are also included as disadvantaged communities in the Joint Office definition.³³

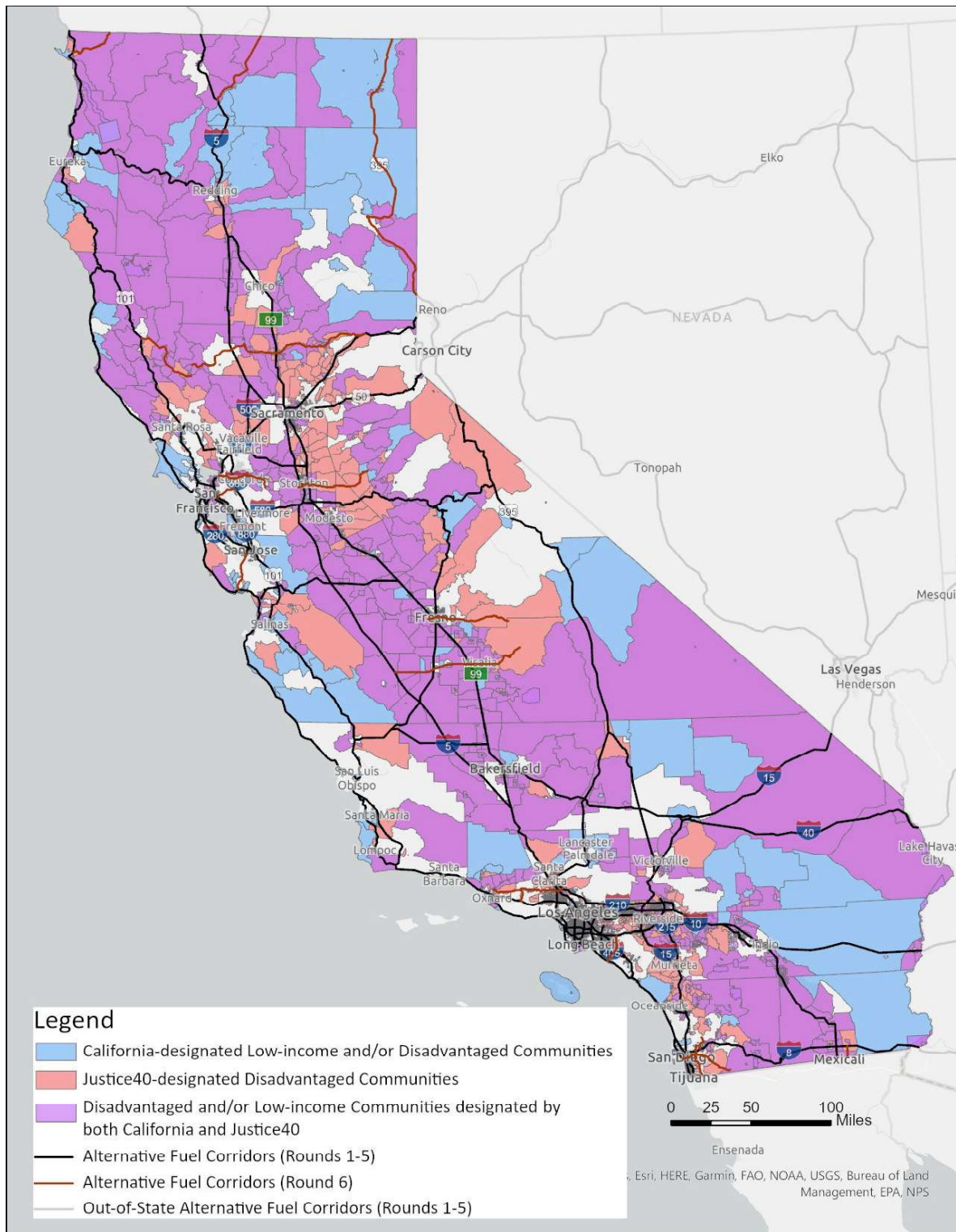
California identifies disadvantaged communities using the California Office of Environmental Health Hazard Assessment's California Environmental Health Screening Tool (CalEnviroScreen). CalEnviroScreen is a mapping tool that identifies California communities that are most affected by many sources of pollution and where people are often especially vulnerable to pollution's effects. CalEnviroScreen uses environmental, health, and socioeconomic information to produce scores for every census tract in the state. Census tracts within the top 25th percentile of CalEnviroScreen scores are considered disadvantaged.

California low-income communities are defined as census tracts with median household incomes at or below 80 percent of the statewide median income or with median household incomes at or below the threshold designated as low income by the Department of Housing and Community Development.³³

Figure 6 shows communities that are disadvantaged, under the Justice40 Initiative and/or California Environmental Protection Agency (CalEPA) designations, and/or low-income.

³³ <https://www.anl.gov/es/electric-vehicle-charging-equity-considerations>

Figure 6: Disadvantaged and Low-Income Communities and Federally Recognized Tribal Lands



Sources: CalEnviroScreen 4.0, American Community Survey 2019 5-year income and average household size estimates, California Department of Housing and Community Development 2021 State Income Limits, U.S. Department of Transportation and U.S. Department of Energy Interim Disadvantaged Community Designations

Process to Identify, Quantify, and Measure Benefits to DACs Through this Plan

The CEC contracted with the National Renewable Energy Laboratory (NREL) to develop methods for calculating the benefits of the Clean Transportation Program, including charging infrastructure deployment projects. This quantification includes analyzing two categories of benefits: “expected benefits” (i.e., direct benefits) and “market transformation benefits” (i.e., indirect benefits). Comparable benefits can similarly be assessed for projects funded under the NEVI Program.

As indicated below, the quantifications of expected benefits and market transformation benefits both include key metrics, related to air quality improvement, greenhouse gas emission reductions, and petroleum displacement. Additionally, NREL also calculated the monetary value of air quality improvement benefits associated with the Clean Transportation Program’s EVSE infrastructure investments. Finally, independent of NREL’s analysis, the CEC tracks the amount of program and match funding invested into each project.

Benefit	Metric
Air Quality Improvement	Particulate matter reductions NO _x reductions
Greenhouse Gas Emission Reductions	Carbon dioxide-equivalent reductions
Petroleum Displacement	Gasoline or Diesel gallons displaced

When focusing on charging infrastructure projects, which have a fixed address, these benefits can be localized and assigned to distinct communities, including those identified as disadvantaged and low-income communities.

Key data inputs for NREL’s analysis of charging infrastructure include both literature reviews of average charging usage as well as real world reported data from Clean Transportation Program funding recipients. The CEC continues to explore opportunities to collect more charger usage data directly from EVSPs. For air quality metrics, emission factors are based on CARB’s Vision 2.1 model, which incorporates calendar year, vehicle type, fuel type, and location. Greenhouse gas reduction metrics are based on CARB’s established carbon intensities for fuels under the Low Carbon Fuel Standard, or, when necessary, CARB’s CA-GREET 2.0 model.

In addition to the Clean Transportation Program’s Benefits Report, the CEC also identifies improving mobility as an important benefit in the state’s shift toward transportation electrification. Access to charging infrastructure by all Californians will give drivers greater confidence that EVs will meet their mobility needs. Since 2019, the CEC has assessed whether public EV charging infrastructure is disproportionately deployed to inform Clean Transportation Program investments in EV charging infrastructure. The initial *Senate Bill 1000 Electric Vehicle Charging Infrastructure Deployment Assessment*, published in December 2020, focused on public Level 2 and

DCFC capacity, and found that low-income communities, on average, have fewer public chargers per capita than middle- or high-income communities. The second assessment, which the CEC expects to publish in July 2022, focuses on public DCFC coverage and finds that rural communities have less access to public DCFCs than their urban counterparts.³⁴

The CEC will continue to refine and update the analysis to identify charging network gaps and build out charging infrastructure that serves all Californians. Findings from the SB 1000 assessment, including statewide maps showing DCFC capacity and coverage within disadvantaged, low-income, and/or rural communities, will help guide DCFC deployments funded by NEVI. The findings will also help to identify areas of prioritization throughout the state to meet federal and state equity goals.

The state is also working to quantify benefits in ways that go beyond measuring funding with a given location and will continue to investigate new metrics to ensure investments and DCFC deployments enhance equity within the state.

Labor and Workforce Considerations

California strongly supports investments that expand good paying jobs, increase job access, improve job quality, provide strong labor standards, strengthen local/regional economies, and develop an equitable and diverse workforce in building EVSE infrastructure.

Projects funded through NEVI will be approved by the CEC, with oversight by Caltrans. By utilizing a CEC contracting mechanism, projects funded through NEVI will therefore be required to meet the provisions of California's Assembly Bill 841 (Ting, Chapter 372, Statutes of 2020). The requirements specify that all electric vehicle charging infrastructure and equipment located on the customer side of the electrical meter shall be installed by a contractor with the appropriate license classification, as determined by the Contractors' State License Board. Additionally, at least one electrician on each crew, at any given time, must hold an EVITP certification. Since each NEVI-funded charger will supply 25 kilowatts or more to a vehicle, at least 25 percent of the total electricians working on the crew for a project, at any given time, must possess EVITP certification. One member of each crew may be both the licensed contractor and an Electric Vehicle Infrastructure Training Program certified electrician. Additional standards for NEVI-funded projects will conform to any regulations resulting from the proposed rulemaking by the Federal Highway Administration issued on June 22, 2022.

California has taken a strategic approach to promote an inclusive EVSE workforce, implement labor standards, provide safety training, and establish EVSE career pathways starting with the state's high school career training education programs. This is not a static effort, as the transportation electrification sector is dynamic given the growth in new and emerging EVSE technologies, new and revised building and electrical codes

³⁴ About 43 percent of rural communities are low-income.

that improve worker and consumer safety, and the need to synthesize transportation electrification across the energy systems of the built environment.

The “Workforce Projections to Support Battery Electric Vehicle Charging Infrastructure Installation”³⁵ report shows that California’s statewide light-duty EV program goals, and the associated EVSE infrastructure, would generate workforce needs of approximately 38,200 up to 62,400 job-years³⁶ between 2021 to 2031 in California. Estimates of projected medium and heavy-duty EV growth indicate the associated charging infrastructure would generate approximately 9,100 job-years from 2021 – 2030 in addition to the light-duty charging infrastructure workforce needs. The combined estimate of workforce needs for charger installations is approximately 47,300 up to 71,500 job-years.

California has established and will engage the appropriate labor and workforce entities and strategies for successful implementation of this plan. Examples include:

1. Strong Workforce Support and Training – California has a history of strong support and partnerships in the development of a diverse workforce for EVSE installation including:
 - **ETP** - ETP provides funding to employers to assist in upgrading the skills of their workers through training that leads to good paying, high-road jobs and long-term careers. Since 1982, ETP has reimbursed employers, including small and minority owned enterprises, well over \$1 billion for training workers. ETP prioritizes construction apprenticeship as well as apprenticeship training in non-traditional/emerging sectors, such as EVSE manufacturing and installations. Applicable training occupations for EVSE installations include inside wireman, construction workers, and electricians.
 - **CEC** – CEC will continue to invest in incumbent and new worker entrants upskilling and new skills development to support communities to place chargers in their areas.
 - **CWDB** - CWDB establishes workforce development policy³⁷, develops innovative initiatives³⁸, and administers workforce programs such as High Road Construction Careers (HRCC) and High Road Training Partnerships (HRTPs). The principles of social equity, quality jobs, and climate resilience define California’s High Road vision—and partnership, worker voice, industry-led problem solving, and industry-based training solutions are the essential

³⁵ [https://caletc.com/assets/files/Workforce-](https://caletc.com/assets/files/Workforce-ProjectionstoSupportBatteryElectricVehicleChargingInfrastructureInstallation-Final202106082.pdf)

[ProjectionstoSupportBatteryElectricVehicleChargingInfrastructureInstallation-Final202106082.pdf](https://caletc.com/assets/files/Workforce-ProjectionstoSupportBatteryElectricVehicleChargingInfrastructureInstallation-Final202106082.pdf)

³⁶ Workforce needs are estimated based on analysis of survey responses, provided in person-days, and converted to job-years assuming a full time equivalent (FTE) of 2080 hours and 8-hour workdays. Note that job-years cannot always be directly translated into a number of jobs created, but instead help to describe the demand for work. One job-year is equivalent to one person performing a job for one year, or two people performing the same job for half a year, etc.

³⁷ https://cwdb.ca.gov/policy_briefs/

³⁸ <https://cwdb.ca.gov/initiatives/>

elements of a High Road approach to workforce development. HRCC is designed to create access to registered apprenticeship in the electrical trades, among other crafts, for disadvantaged and under-represented workers. HRTPs currently exist in ZEV manufacturing, public transit, and other transportation fields and could be a model for EVSE manufacturing in California. The California fiscal year 2022-23 budget includes \$15 million in HRCC and HRTTP per year for the next three years, which could be utilized to advance economic equity in California's growing EVSE industry.

- **Foundation for California Community Colleges** – The Grow Apprenticeship California initiative helps to expand and scale apprenticeship in new and innovative sectors, and pre-apprenticeship programs linked to traditional and new and innovative programs, with the goal of connecting all Californians to good jobs with family-sustaining wages and advancement opportunities.
2. **On-the-Job Training (OJT)** – The state developed new OJT programs for EVSE installations and service including basic safety training Occupational Safety and Health Administration (OSHA) 10-hour training classes teaches basic safety and health information to entry-level workers in construction and general industry. These new OJT programs are critical to the state's goals and to the deployment plan as the training is provided in low-income communities and disadvantaged communities and in rural areas of the state. These programs provide important early career EVSE pathways to pre-apprenticeships and apprenticeships. New partnerships that will be modeled for the implementation of this deployment plan include the Transportation Electrification Training Project with four regional locations of the California Conservation Corps, the Kern Community College District, the County of Los Angeles, and community-based organizations.

Cybersecurity

In September 2018, California's Governor Jerry Brown signed Senate Bill 327 which put into law the nation's first information privacy law, specifically pertaining to connected devices. Connected devices often contain vulnerabilities and are a target for cyberattacks. The law requires a "manufacturer of a connected device to equip the device with a reasonable security feature or features that are appropriate to the nature and function of the device"³⁹. Additionally, any information the device may collect, contain, or transmit must be protected from unauthorized access, destruction, use, modification, or disclosure.

EV chargers provide direct connections to the vehicle's onboard system and the EV charging service provider's network, and indirectly to the driver's smart phone if the charge is paid for with an app, banking information if a debit or credit card is utilized, telecommunications provider, and the electric grid.

³⁹ https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB327

In April 2022, NREL and members of the electric vehicle industry performed testing of SAE International's PKI Design Platform. PKI, or public key infrastructure, is a method for encrypting information exchange and certifying the authenticity of devices to help ensure digital trust between vehicles and charging stations.⁴⁰ Although additional testing is needed, the demonstration indicated that PKI could improve security of communications between vehicles and EV charging equipment. Additional standards for NEVI-funded projects will conform to any regulations resulting from the proposed rulemaking by the Federal Highway Administration issued on June 22, 2022.

Program Evaluation

California has multiple tools for evaluating program effectiveness, monitoring charger deployment, and assessing charger needs. To evaluate program effectiveness, California currently monitors and reports progress of EV charging infrastructure through the ZIP. The CEC will publish the final ZIP in 2022 and plans to update it biennially.⁴¹ The ZIP will include updates on ZEV infrastructure and funding. The CEC also publishes an annual Investment Plan for the Clean Transportation Program, which includes program evaluation to guide future investments.

To assess charger needs, the CEC publishes biennial assessments⁴², which include discussions of current charging infrastructure. The Clean Transportation Program requires an annual Investment Plan, which includes updates on progress towards the state's goals. To monitor charger deployment, the CEC publishes a count of EV chargers and EV deployment in California and updates it quarterly.⁴³

All of these mechanisms include public workshops, drafts, or opportunities to comment, and all will assist the state in monitoring and reporting progress on the EV AFC network.

The required annual updates to the deployment plan will be used as further opportunities to evaluate and report progress. In preparing each year's Plan, California will include updates on the status of charging infrastructure in general, and the projects funded with NEVI funding in particular. Finally, CEC agreement managers will track progress through monthly calls, quarterly reports, invoice reviews, critical project reviews, and other tools.

Both successful and unsuccessful applications will be reviewed, and lessons learned will be incorporated into future solicitations and agreements in an effort to continually look for opportunities for improvement in California's deployment plan.

⁴⁰ <https://www.nrel.gov/news/program/2022/ev-manufacturers-mobilize-behind-charging-cybersecurity-at-nrel.html>

⁴¹ <https://www.energy.ca.gov/event/workshop/2022-04/draft-zero-emission-vehicle-infrastructure-plan>

⁴² <https://www.energy.ca.gov/programs-and-topics/programs/electric-vehicle-charging-infrastructure-assessment-ab-2127>

⁴³ <https://www.energy.ca.gov/data-reports/energy-almanac/zero-emission-vehicle-and-infrastructure-statistics/electric-vehicle>

Discretionary Exceptions

As California works to identify gaps in the current DCFC infrastructure and prepare for the initial solicitation, there may be segments where the state may need to request exceptions to the AFC and/or NEVI criteria and guidelines. At this time, California has not yet identified a need for exceptions.

Appendix A: National Environmental Policy Act (NEPA) Documents

Categorical Exclusion Determination Form



**CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION
DETERMINATION FORM (rev. 04/2022)**

Project Information

National Electric Vehicle Infrastructure Formula Funding (NEVI) California State EV Infrastructure Deployment Plan (Plan) State of California; Department of Transportation

Project Description

The Bipartisan Infrastructure Law (BIL), enacted as the Infrastructure Investment and Jobs Act (IIJA), Public Law 117-58 (Nov. 15, 2021), includes a total of up to \$7.5 billion in dedicated funding to help make EV chargers accessible to all Americans for local to long-distance trips. That \$7.5 billion includes a \$5 billion formula program and a \$2.5 billion discretionary grant program. The \$5 billion NEVI Formula Program will provide dedicated funding to States to strategically deploy EV charging infrastructure and establish an interconnected network to facilitate data collection, access, and reliability.

The BIL requires States to develop and submit a State EV Infrastructure Deployment Plan (Plan) that describes how the State intends to use its apportioned NEVI Formula Program funds in accordance with the provided guidance. The State of California has developed a Plan to be reviewed by the Federal Highway Administration (FHWA) for approval.

The State's Plan comprises the building blocks for the facilitation of a national EV charging network within California, providing EV users with the confidence that they can travel long distances and expect reliable access to EV charging stations when needed, while also recognizing the unique needs of different regions and communities. The Plan specifically provides information about how the state intends to deploy EV charging infrastructure including strategies for operations and maintenance; strategies for identifying electric vehicle charger service providers and station owners, strategies for EVSE data collection and sharing; strategies to address resilience, emergency evacuations, snow removal, and other seasonal needs; strategies for promoting strong labor, safety, training, and installation standards; equity considerations; labor and workforce considerations; cybersecurity considerations; a plan for how the program will be evaluated, discretionary exceptions; and environmental concerns and considerations.

Caltrans CEQA Determination (Check one)

- ☐ **Not Applicable** – Caltrans is not the CEQA Lead Agency
- ☐ **Not Applicable** – Caltrans has prepared an IS or EIR under CEQA

Based on an examination of this proposal and supporting information, the project is:

- ☒ **Exempt by Statute.** (PRC 21080[b]; 14 CCR 15260 et seq.)
- ☐ **Categorically Exempt. Class** (PRC 21084; 14 CCR 15300 et seq.)
 - ☐ No exceptions apply that would bar the use of a categorical exemption (PRC 21084 and 14 CCR 15300.2). See the Caltrans's SER Chapter 34 for exceptions.

**CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION
DETERMINATION FORM**

- ☐ **Covered by the Common Sense Exemption.** This project does not fall within an exempt class, but it can be seen with certainty that there is no possibility that the activity may have a significant effect on the environment (14 CCR 15061[b][3].)

Prepared by:

Tracey D'Aoust Roberts

Print Name

District 8 Env. Office Chief

Signature

07/11/2022

Date

Environmental Approval:

Kurt Heidelberg

Print Name

Deputy Director of Env., D8

Signature

7/21/2022

Date

Project Manager:

Tony Dang

Print Name

Deputy Director of
Sustainability

Signature

7/21/2022

Date

**CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION
DETERMINATION FORM****Caltrans NEPA Determination**☐ **Not Applicable**

Caltrans has determined that this project has no significant impacts on the environment as defined by NEPA, and that there are no unusual circumstances as described in 23 CFR 771.117(b). See Caltrans' SER Chapter 30 for unusual circumstances. As such, the project is categorically excluded from the requirements to prepare an EA or EIS under NEPA and is included under the following:

☒ **23 USC 326:** Caltrans has been assigned, and hereby certifies that it has carried out the responsibility to make this determination pursuant to 23 USC 326 and the Memorandum of Understanding dated April 18, 2022, executed between FHWA and Caltrans. Caltrans has determined that the project is a Categorical Exclusion under:

☒ **23 CFR 771.117(c): activity (c)(1)**

☐ **23 CFR 771.117(d): activity (d)**

☐ **Activity listed in Appendix A of the MOU between FHWA and Caltrans**

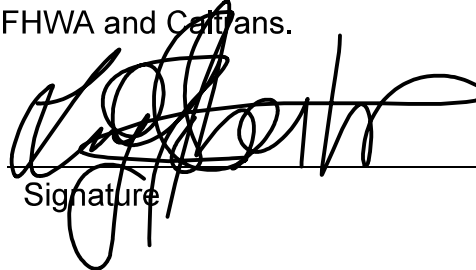
☐ **23 USC 327:** Based on an examination of this proposal and supporting information, Caltrans has determined that the project is a Categorical Exclusion under 23 USC 327. The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 USC 327 and the Memorandum of Understanding dated December 23, 2016 and executed by FHWA and Caltrans.

Prepared by:

Tracey D'Aoust Roberts

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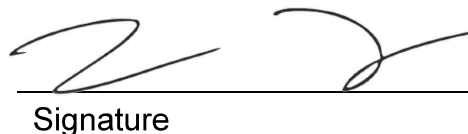
Date

Project Manager:

Tony Dang

Print Name

Deputy Director of
Sustainability


Signature

7/21/2022

Date

**CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION
DETERMINATION FORM****Date of Categorical Exclusion Checklist completion (if applicable): 07/11/2022****Date of Environmental Commitment Record or equivalent: N/A**

An Environmental Commitments Record is not required for the plan, as the plan is an activity that does not lead directly to construction. With that said, the installation of EV charging infrastructure is a separate activity(s) which will require its own environmental approval(s) and environmental commitment record(s).

In order to account for the potential environmental effects of proposed activities associated with the deployment of EV chargers throughout the state, the following primary, yet not complete list of potential (which will be clarified during the project-level analysis) state and federal environmental challenges/concerns must be considered:

- Potentially hazardous waste issues could impact the development and delivery of projects. Assessments for acquisition of new properties to identify hazardous and potentially hazardous waste contaminations within and adjacent to the property locations will be required. Additionally, aerially deposited lead (ADL) testing may need to occur depending on the locations(s) of the project sites.
- Critical habitat and occurrences of federal and state listed special status/endangered/threatened/fully protected species are known to occur in areas adjacent to and/or areas that transverse AFCs and nominated AFCs which could result in the need for Section 7 consultations, biological assessments, mitigation, and permitting.
- Many structures and archaeological sites eligible or listed on the National Register of Historic Places and/or the California Register of Historical Resources are located along the existing AFCs as well as the cycle 6 AFC nominations. Moreover, many of the current and nominated AFCs run parallel to or transverse prehistoric trails and trade routes which could mean the presence of cultural resources. The potential impacts to cultural resources will result in the need for various reports, consultations, and potential mitigation.
- Impacts to farmland will result in the Farmland Protection Act (coordination with NRCS and completion of Form CPA-106 or Form AD-1006) requirements being applied as well as compliance with the Williamson Act (CEQA).

For each segment, the project locations must be evaluated to determine potential environmental impacts to comply with both NEPA and CEQA. For projects that will have impacts to the environment, environmental document(s) must be completed along with the necessary consultations. Should waters of the US or waters of the state, streambed alterations, and/or coastal waters and shores be impacted, permitting will be required.

**CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION
DETERMINATION FORM****Continuation sheet:****AIR QUALITY**

Environmental Engineering completed their review of the *California Plan for Electric Vehicle Infrastructure Deployment*, received on July 6, 2022. The NEVI plan is exempt from conformity determination because it falls under the exempt project (Planning activities) listed in 40 CFR 93.126. An Air Quality Report is not required.

NOISE QUALITY

Environmental Engineering completed their review of the *California Plan for Electric Vehicle Infrastructure Deployment*, received on July 6, 2022. There are no physical construction activities included in the NEVI plan which means the plan is not a Type I project. Therefore, no noise study is required.

HAZARDOUS WASTE

Environmental Engineering completed their review of the *California Plan for Electric Vehicle Infrastructure Deployment*, received on July 6, 2022. There are no physical construction activities proposed, therefore there are no impacts to hazardous waste.

BIOLOGICAL RESOURCES

Biological Studies completed their review of the *California Plan for Electric Vehicle Infrastructure Deployment*, received on July 6, 2022. No effect to special status species listed under the Federal Endangered Species Act or U.S. Fish and Wildlife Service designated critical habitat and "no take" of State listed species. No effect to riparian habitat, sensitive natural communities, wetlands, or wildlife habitat connectivity. The NEVI plan does not conflict with local, regional, or state habitat conservation plans

CULTURAL RESOURCES

Cultural Studies completed their review of the *California Plan for Electric Vehicle Infrastructure Deployment*, received on July 6, 2022. This is an administrative action and is not considered to be an undertaking under Section 106 of the National Historic Preservation Act. No cultural technical study is required for approval of this plan.

WATER QUALITY

The project does not propose to add any new impervious surfaces. The project would not result in any erosion, discharge, or water pollution. No water quality impacts are anticipated.

STORM WATER

The project does not propose any physical construction and will not alter the drainage pattern or velocity of existing stormwater runoff.

HYDROLOGY AND FLOODPLAIN

The project is located within a 100-year base floodplain and will not result in a significant encroachment in the 100-year floodplain.



**CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION
DETERMINATION FORM**

LANDSCAPE ARCHITECTURE

Because the NEVI is a plan without and design aspects, A Visual Impact Assessment (VIA) questionnaire to determine the VIA level was not necessary or required.

COMMUNITY IMPACTS

The NEVI is a plan without design or construction aspects. Therefore, no relocations or land use changes are proposed. The project does not propose to acquire land designated as farmlands/timberlands, parks, recreational facilities, schools, community centers, medical facilities, or other facilities with community value. The NEVI plan proposes off system activities, so it will not impact emergency services, traffic, transportation/pedestrian facilities, and bicycle facilities. The NEVI plan will not impact any designated Wild and/or Scenic rivers. The NEVI plan will not cause disproportionately high and adverse effects on any minority or low-income populations in accordance with the provisions of EO 12898. No negative community impacts are anticipated.

GEOLOGY/SOILS/SEISMICITY/TOPOGRAPHY/PALEONTOLOGY

The plan itself does not involve activities that disturb any soils or build any structures which would be dependent on the soils below. No impacts to geology, soils, seismicity, topography, or paleontology.

ENERGY

The NEVI plan does not involve operational and capacity improvements. No energy impacts are anticipated.

GREENHOUSE GAS EMISSIONS

The NEVI plan itself does not consist of any physical construction and will not alter or create a new source of greenhouse gas emissions. No impacts to greenhouse gases are anticipated.

CLIMATE CHANGE

The plan itself does not involve physical construction, or operational and capacity improvements. The plan will not alter the hazard of wildfires, flooding, or sea level rise. No climate change impacts are anticipated.

WILDFIRE

The plan does not propose to alter the existing topography. The plan does not propose to install associated infrastructure or require maintenance on system. The plan is off system and will not impair emergency response plans or emergency evacuation plans. No wildfire impacts are anticipated.

PERMITS REQUIRED

No permits are required for this plan.

Changes to the project description, scope of work, limits, construction strategy and/or staging and storage requirements will require that Environmental Planning be notified in



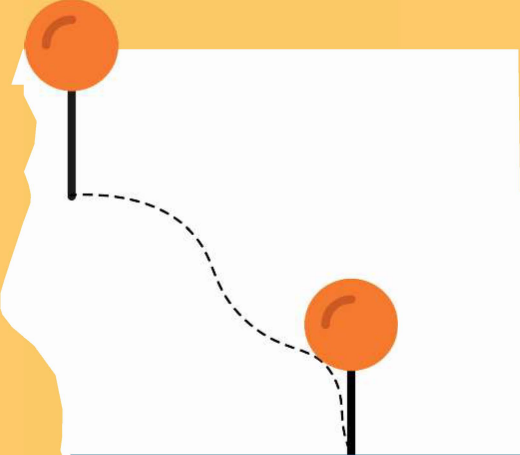
**CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION
DETERMINATION FORM**

a timely manner, to determine if an Environmental Revalidation (and/or updates to the Technical Studies performed) is required.

DOCKETED	
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TN #:	252580
Document Title:	California's Deployment Plan for the National Electric Vehicle Infrastructure (NEVI) Program Annual Update
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AUGUST 2023



California's Deployment Plan for the National Electric Vehicle Infrastructure (NEVI) Program

ANNUAL UPDATE



PREPARED BY



CALIFORNIA
ENERGY COMMISSION

California's Deployment Plan for the National Electric Vehicle Infrastructure Program 2023 Update

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Table of Contents

Abbreviations & Terms	5
Introduction.....	6
Updates from Prior Plan	6
State Agency Coordination	7
Memoranda of Understanding with Other Agencies	7
Interagency Working Groups.....	8
California's State Funding Context	8
Build America, Buy America Requirement	9
Public Engagement	9
California NEVI Workshops	10
September 2022 Technical Workshop	10
April 2023 Tools Workshop.....	11
June 2023 NEVI Update Workshop	13
Community Engagement Outcomes Report	14
Outreach to Disadvantaged Communities	15
Tribal Engagement	15
Utility Engagement	16
Site-Specific Public Engagement	18
Plan Vision and Goals	18
Contracting.....	20
Contractor Engagement with Local Communities	24
Status of Contracting Process.....	25
Awarded Contracts	25
Scoring Methodologies Utilized.....	25
Plan for Compliance with Federal Requirements.....	26
Civil Rights	26
Existing and Future Conditions Analysis	27
California Geography and Terrain	27
California ZEV Sales Update.....	27
Market Conditions	27
Climate	28
Freight	28
California's Electric Grid	29
California's Electric Utilities	30

Known Risks and Challenges	30
Alternative Fuel Corridor Designations.....	31
Freight EV Corridors	37
Existing Charging Stations.....	39
Existing Locations of Charging Infrastructure Along AFCs	39
EV Charging Infrastructure Deployment	41
Planned Charging Stations	41
Infrastructure Deployments/Upgrades.....	42
Planning Towards a Fully Built Out Determination	45
Implementation	45
Strategies to Address Resilience, Emergency Evacuation, Snow Removal/Seasonal Needs	46
Equity Considerations	46
Identification and Outreach to Disadvantaged Communities (DACs)	47
Process to Identify, Quantify, and Measure Benefits to DACs	50
Labor and Workforce Considerations.....	54
Physical Security & Cybersecurity.....	56
Program Evaluation.....	57
Discretionary Exceptions.....	58

List of Figures

Figure 1: NEVI Matchmaking Tool.....	12
Figure 2: California's NEVI Corridor Map Showing All 21 Corridor Groups	22
Figure 3: Sample Corridor Group Map (Corridor Group 1).....	23
Figure 4: Designated and Round 7 Nominated Alternative Fuel Corridors for Electric Vehicles	32
Figure 5: Designated and Round 7 Nominated Alternative Fuel Corridors for Electric Vehicles (Selected Zoom of Northern California).....	33
Figure 6: Designated and Round 7 Nominated Alternative Fuel Corridors for Electric Vehicles (Selected Zoom of Southern California)	33
Figure 7: Proposed Freight EV Corridors	38
Figure 8: Alternative Fuel Corridors and Existing Public DC Fast Charging and Level 2 Charging Stations in California	39
Figure 9: Alternative Fuel Corridors and Existing Public DC Fast Charging and Level 2 Charging Stations in California (Selected Zoom of Northern California)	40

Figure 10: Alternative Fuel Corridors and Existing Public DC Fast Charging and Level 2 Charging Stations in California (Selected Zoom of Southern California)	40
Figure 11: Existing DC Fast Charging Stations Along Alternative Fuel Corridors in Northern and Southern California	43
Figure 12: Existing DC Fast Charging Stations Along Alternative Fuel Corridors (Selected Zoom of Northern California)	44
Figure 13: Existing DC Fast Charging Stations Along Alternative Fuel Corridors (Selected Zoom of Southern California)	44
Figure 14: Locations of Alternative Fuel Corridors and Disadvantaged or Low-income Communities	48
Figure 15: Locations of Alternative Fuel Corridors and Disadvantaged or Low-income Communities (Selected Zoom of Northern California)	49
Figure 16: Locations of Alternative Fuel Corridors and Disadvantaged or Low-income Communities (Selected Zoom of Southern California)	49
Figure 17: Ludlow to Fenner Along Interstate 40.....	58
Figure 18: Corridor With Potential NEVI-compliant and Upgradable EV Charging Stations.....	58
Figure 19: Ludlow to Fenner	59
Figure 20: Potential Charging Station Sites in Ludlow.....	59
Figure 21: Kelbaker Road at Interstate 40	60
Figure 22: Essex Road at Interstate 40.....	60

List of Tables

Table 1: The Top-Six Ranked Corridor Groups Eligible for Round 1 Solicitation.....	21
Table 2: Sample Corridor Group Segments (Corridor Group 1)	23
Table 3: Ranking Formula and Factors for California's First NEVI Solicitation	24
Table 4: Round 7 Alternative Fuel Corridor Nominations – EV Corridor Pending	34
Table 5: Round 7 Alternative Fuel Corridor Nominations – EV Corridor Ready	34
Table 6: Rounds 1 – 6 Alternative Fuel Corridor Designations – EV Corridor Pending.....	34
Table 7: Rounds 1 – 6 Alternative Fuel Corridor Designations – EV Corridor Ready.....	36
Table 8: Proposed Freight EV Corridors	37
Table 9: Status of Chargers Needed to Support 2030 Light-Duty ZEV Targets.....	41
Table 10: Measuring Benefits of NEVI Formula Program Investments	51

Abbreviations & Terms

Abbreviation	Term
AFC	Alternative Fuel Corridor
AFDC	Alternative Fuels Data Center
BIPOC	Black, Indigenous, People of Color
CalSTA	California State Transportation Agency
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CEC	California Energy Commission
CFI	Charging and Fueling Infrastructure Discretionary Grant Program
CCS	Combined Charging System
CFMP	California Freight Mobility Plan
CPUC	California Public Utilities Commission
CTC	California Transportation Commission
CTP	Clean Transportation Program
CWDB	California Workforce Development Board
DAC	Disadvantaged community
DACAG	Disadvantaged Communities Advisory Group for CEC and CPUC
DCFC	Direct Current fast charger
Deployment Plan	California's National Electric Vehicle Infrastructure Deployment Plan
ETP	Employment Training Panel
EV	Electric vehicle
EVITP	Electric Vehicle Infrastructure Training Program
EVSE	Electric vehicle supply equipment
FHWA	Federal Highway Administration
GO-Biz	Governor's Office of Business and Economic Development
HRTF	High road training partnership
IEPR	Integrated Energy Policy Report
IOU	Investor-owned utility
Joint Office	US Joint Office of Energy and Transportation
LIC	Low-income community
NAAC	Native American Advisory Committee
NACS	North American Charging Standard
NEVI	National Electric Vehicle Infrastructure Formula Program
OEM	Original equipment manufacturer
US DOT	US Department of Transportation
US DOE	US Department of Energy
ZEV	Zero-emission vehicle
ZIP	ZEV Infrastructure Plan

Introduction

The California Department of Transportation (Caltrans) and the California Energy Commission (CEC) are pleased to present this first NEVI Deployment Plan Update to the Federal Highway Administration (FHWA) and Joint Office for Energy and Transportation (Joint Office). California's NEVI agencies (Caltrans and the CEC) have been active in NEVI planning and administration since the first plan was submitted in August 2022 and have advanced two major tasks. The first is the Interagency Agreement between Caltrans and the CEC, which delineates the two agencies' responsibilities for NEVI implementation. The Interagency Agreement was approved by the CEC on July 26, 2023. When the California Department of General Services completes its review, the Interagency Agreement will be finalized. The second major task is the preparation of the NEVI solicitation manual, which is the CEC's primary document explaining the scope, qualifications, and requirements for applications to California's NEVI Program. The first solicitation is expected to be released in Q3 2023. Caltrans and the CEC will report on the results of the first solicitation in the 2024 NEVI Plan Update.

Most of the material in this Update is new. In a few key sections where no changes have occurred since 2022, such as Civil Rights and Plan Vision and Goals, text has been imported from the 2022 NEVI Plan to provide continuity for these sections.

Updates from Prior Plan

These sections of California's NEVI Deployment Plan Update have been updated following the guidance and template issued by the Joint Office.

- **Public Engagement:** Caltrans and the CEC have been active with public engagement since the first plan was filed. Three major public workshops have been held since September 2022 and a fourth will be held after the first solicitation is released, sometime in Q3 2023. This public engagement includes outreach to disadvantaged communities, Native nations, and utilities.
- **Community Engagement Outcomes Report:** This new report summarizes California's public engagement philosophy, goals, and actions related to NEVI.
- **Plan Vision and Goals:** Brief updates on reliability measures.
- **Contracting:** Updates on California's contracting approach for NEVI.
- **Existing and Future Conditions Analysis:** Updates on the number of electric vehicles sold in California and the number of chargers installed for passenger vehicles since the first Plan was submitted in 2022.
- **Alternative Fuel Corridor (AFC) Update:** The Round 6 AFCs have been approved and the Round 7 nominations are pending with the FHWA. A complete description of corridors nominated in Round 7 is provided.

- **Freight Planning and Designated Corridors:** A new section describing California's nominations for Freight Electric Vehicle (EV) Corridors.
- **Equity Considerations and Process to Identify, Quantify, and Measure Benefits to Disadvantaged Communities (DACs):** Information on how California will assess and measure benefits.
- **Labor and Workforce:** Updated information on California's policies and actions to ensure meaningful engagement on NEVI-related workforce issues.

State Agency Coordination

Caltrans and the CEC have continued to collaborate closely since the first NEVI Plan was filed. The NEVI agencies collaborated on the preparation of an application to the United States Department of Transportation's (US DOT) Charging and Fueling Infrastructure Discretionary Grant Program (CFI), the *West Coast Truck Charging and Fueling Corridor Project*, in conjunction with the states of Oregon and Washington. The border-to-border truck charging corridor would follow Interstate 5 from Mexico to Canada and include 34 truck charging stations and five hydrogen fueling stations. Major West Coast Ports would be linked through spurs, helping to enable the electrification of many West Coast drayage fleets. The CEC and Caltrans have continued to collaborate on NEVI planning and outreach in advance of the first solicitation.

Please see the below subsections for specific details about coordination among state agencies.

Memoranda of Understanding with Other Agencies

Caltrans and the CEC have achieved a significant milestone in their efforts to implement California's NEVI Formula Program. The two agencies have officially joined forces by developing the Interagency Agreement, which establishes clear roles and responsibilities for administering the NEVI Formula Program. This agreement is crucial as it designates the CEC as the responsible state agency for administering and allocating California's share of NEVI formula funds. The Interagency Agreement establishes Caltrans as the state agency responsible and accountable to the FHWA for overseeing federal funds and the CEC, consistent with the Stewardship and Oversight Agreement between Caltrans and the FHWA.

The Interagency Agreement received approval from the CEC during its public meeting on July 26, 2023. The Interagency Agreement marks the formal beginning of a new partnership between Caltrans and the CEC, strengthening California's strategy for zero-emission vehicle infrastructure deployment. Its scope of work ensures close coordination between Caltrans and the CEC in areas such as the nomination of federally designated Alternative Fuel Corridors, development of annual NEVI Deployment Plans, and compliance with federal requirements associated with the NEVI Formula Program.

Interagency Working Groups

Caltrans and the CEC continue to collaborate with the California State Transportation Agency (CalSTA), the California Transportation Commission and its Senate Bill 671 Working Group,¹ the Governor's Office of Business Development (GO-Biz), the California Public Utilities Commission (CPUC), and the California Air Resources Board (CARB). CalSTA is California's lead policy agency for transportation. CARB is the lead California agency for zero-emission vehicle regulations and vehicle funding. CEC is the state's lead agency in zero-emission vehicle infrastructure, related policy and planning, and funding. GO-Biz plays a key convening role in zero-emission vehicle (ZEV) coordination through the development of California's ZEV Market Development Strategy,² to which several state agencies contribute.

The CEC and Caltrans continue to work closely with CARB on multiple issues germane to NEVI, including truck charging, heavy-duty vehicle demonstrations, charging infrastructure for California tribes, hydrogen station development, and zero-emission infrastructure policy issues. CARB is also responsible for new regulations like the Advanced Clean Cars II, Advanced Clean Trucks, and Advanced Clean Fleets Rules, which are helping drive demand for zero-emission charging and hydrogen fueling infrastructure. CARB also administers the state's light-duty vehicle subsidy program, the Clean Vehicle Rebate Project. The CEC and Caltrans also continue to work with the CPUC regarding utility and grid upgrades needed to support charging infrastructure through NEVI and other public investments.

Internationally, Caltrans is working with federal, state, and local partners in Mexico and the United States to update the 2021 California-Baja California Border Master Plan to address ZEV infrastructure needs for passenger vehicles at and near land ports of entry.

California's State Funding Context

For the 2023-2024 state fiscal year, the CEC's Clean Transportation Program (CTP) allocates funding to multiple zero-emission infrastructure categories.³ These funding allocations are carry-overs from the state's fiscal year 2022-2023 allocations and do not represent funding increases for the current 2023-24 fiscal year. The zero-emission infrastructure categories include:

- Light-Duty Electric Vehicle Charging: \$223 million
- Medium- and Heavy-Duty Truck Charging and Hydrogen Refueling: \$198 million

¹ Senate Bill 671 (Gonzalez, Chapter 769, Statutes of 2022) requires that the California Transportation Commission (CTC) prepare a Clean Freight Corridor Efficiency Assessment to identify freight corridors, or segments of corridors, and the infrastructure needed to support the deployment of zero-emission medium- and heavy-duty vehicles. The Clean Freight Corridor Efficiency Assessment is due December 1, 2023.

² Governor's Office of Business Development. [Zero-Emission Vehicle Market Development Strategy](#).

³ Brecht, P. (2023). [2023-2024 Investment Plan Update for the Clean Transportation Program](#). California Energy Commission.

- Drayage Truck Charging and Hydrogen Refueling: \$185 million
- Off-Road Vehicle and Truck Infrastructure – electric and hydrogen: \$315 million
- Port-Related ZEV Infrastructure – electric and hydrogen: \$40 million
- Hydrogen Fueling Infrastructure Earmark: \$30 million

California leads the nation in ZEV sales and uptake. However, the lack of infrastructure continues to be the major barrier to greater adoption and meeting state goals. Federal funds are essential to creating a broad and equitable charging network. The most recently available modeling shows that California will need about 37,500 DC fast chargers (DCFCs) to support the 8 million light-duty vehicles needed to meet the state's 2030 clean air goals.⁴ The analysis, pursuant to Assembly Bill 2127 (Ting, Chapter 365, Statutes of 2018), will be updated by the end of 2023. California is making good progress in deploying DCFCs but needs additional investments to meet state goals. The federal NEVI Formula Program funding is an important addition to the state's allocations.

Build America, Buy America Requirement

With the FHWA's issuance in February 2023 of the *Build America, Buy America Implementation Plan to Enhance Buy America for EV Chargers*, California's funding solicitations will include a Build America, Buy America section within its requirements. The accompanying solicitation manual will briefly explain the federal requirements and provide a link to additional information. Applicants who receive NEVI funding must comply with the Build America, Buy America requirements and will be responsible for submitting documentation to verify compliance with the requirement.

Public Engagement

Since filing the initial NEVI Plan in August 2022, the CEC and Caltrans have hosted three workshops:

- September 2022: Pre-Solicitation Technical Workshop
- April 2023: NEVI Tools Workshop
- June 2023: NEVI Deployment Plan Update Workshop

⁴ *Ibid.*

The CEC and Caltrans will host a fourth workshop after the initial NEVI solicitation is released in Q3 2023 entitled “Pre-Application Workshop.” The purpose of this workshop will be to inform potential applicants of the specific technical, financial, experiential, and administrative requirements needed to develop an eligible application.

The California NEVI agencies hosted a two-day technical workshop in September 2022 detailing the proposed elements of the first solicitation. In the tools workshop in April 2023, the CEC and Caltrans introduced two new tools intended to improve partner participation in California’s NEVI Program. The first was a digital interactive map with multiple layers of California-specific planning information intended to assist future applicants in developing their proposals. The second was a “matchmaking tool” designed to connect prospective NEVI applicants with other project partners, including site hosts.⁵

Following release of the NEVI Plan Update Guidance, the CEC and Caltrans held a public workshop in June 2023, to describe the new elements required in the Plan Update and to solicit partner recommendations for the Plan Update. Details regarding these public workshops are provided below.

California NEVI Workshops

September 2022 Technical Workshop

During the September 2022 two-day technical workshop, staff described in detail the approach that the CEC and Caltrans will use to implement the NEVI Formula Program.⁶ The presentations included more than 100 slides. The major topics included:

- Creation of 21 corridor groups to geographically organize the 6,600 miles of Alternative Fuel Corridors in California.
- Creation of a ranking system to identify the first round of corridors to be offered in the Q3 2023 solicitation.
- Preference for experienced private contractors as prime applicants that can manage large numbers of new charging station projects across the state.
- Intent to offer multiple solicitations over the five-year program in order to keep the number of new grant agreements manageable.
- Presentation of the analysis of disadvantaged and low-income communities using the federal Justice40 system and the state’s CalEnviroScreen tool.

⁵ California Energy Commission. [NEVI Program](#). The Interactive Map can be accessed through Resources the Data and Maps tab, and the Matchmaker Tool can be accessed through the Project Team tab.

⁶ California Energy Commission. (2022, September 7). [National Electric Vehicle Infrastructure Pre-Solicitation Joint Workshop, Session 1](#).

California Energy Commission. (2022, September 8). [National Electric Vehicle Infrastructure Pre-Solicitation Joint Workshop, Session 2](#).

- Intent to use two-tiers of match requirements, with 50 percent non-federal match required in high-demand areas, and a 20 percent non-federal match requirement in more remote and rural settings where demand is expected to be lower.
- Technical standards and requirements for charging equipment and site amenities.
- Electric Vehicle Infrastructure Training Program (EVITP) compliance.
- Project readiness requirements: utility letter, site host letter, and preliminary site designs.

The two-day workshop was well attended with participants from the charging industry, vehicle original equipment manufacturers (OEMs), ports, government agencies, and community-based organizations.

April 2023 Tools Workshop

The CEC and Caltrans introduced two tools intended to assist potential project applicants to prepare their NEVI applications.⁷ The first is the Interactive Map, which is a multi-layered, GIS-based mapping tool that integrates the 21 corridors eligible for NEVI funding with other California-specific data, such as:

- Justice40, CalEnviroScreen, low income, and Native nations and tribal regions;
- Existing DC fast charge stations, including those that met the initial NEVI-compliance standard, and non-compliant earlier generation stations; and
- Political boundaries for counties and metropolitan planning organizations (MPO) and service territory boundaries for Caltrans' districts and public and private utilities.

⁷ California Energy Commission. (2023, April 13). [*Joint Workshop to Introduce the Interactive Map and Matchmaker Tool in Support of California's National Electric Vehicle Infrastructure Program.*](#)

Staff also introduced and demonstrated the new Matchmaking Tool, which is designed to facilitate contact information between potential site hosts, local contractors, and charging project developers (Figure 1).⁸ One goal with the Matchmaking Tool is to allow local disadvantaged and Black, Indigenous, and People of Color (BIPOC)-owned contracting firms to advertise their skills and capacities to large companies working at the state and national level. Another goal of the tool is to enable local governments seeking to host a charging station to inform project developers of their interest and site potential. As of June 29, 2023, 74 interested partners and 17 site hosts have used the Matchmaking Tool.⁹

Figure 1: NEVI Matchmaking Tool

NEVI Interested Site Host and Partners Sign Up Form

The first National Electric Vehicle Infrastructure (NEVI) Program Funding solicitation is under development and expected to be released in 2023. California Department of Transportation (Caltrans) and California Energy Commission (CEC) heard from various stakeholders about the need for a matchmaker to connect potential site hosts with potential NEVI project leads.

Interested site hosts and other potential NEVI project partners can submit their contact and other relevant information in this form for the purposes of facilitating partnerships. By filing out this form, you agree to have your contact information and facility location posted **publicly** on the CEC's website **AND** have entities contact you.

Note: Site hosts may be contacted by entities applying for non-NEVI funding.

If you have previously filled out this form and would like to be removed from the list, please submit your request here: <https://forms.office.com/g/U0Y1iRbwd8>.

CEC makes no guarantees, promises, or representations as to the qualifications of participants in this matchmaking process, nor as to the success of receiving NEVI funds as a result of participation.

CEC assumes no liability whatsoever for any harm to any corporation or individual which may result from participation in this matchmaking process. Survey respondents, by submitting survey, agree to indemnify, defend, and save harmless the State, its officers, agents, and employees from any and all claims and losses accruing to the survey respondent or any other person, firm, or corporation in connection with participating in the matchmaking process.

* Required

1. Organization/Company *

Enter your answer

2. Organization/Company Type *

☐ Business

☐ Nonprofit Organization

☐ California Native American Tribe

☐ Public or Government entity

⁸ California Energy Commission. [NEVI Interested Site Host and Partners Sign Up Form](#).

⁹ California Energy Commission. (2023, June 29). [NEVI Interested Site Host and Partners List](#).

June 2023 NEVI Update Workshop

The workshop agenda included:

- Summary of the *West Coast Truck Charging and Fueling Corridor Project*, which was submitted to the FHWA's Charging and Fueling Infrastructure Discretionary Grant Program.
- Status of the initial NEVI solicitation.
- Overview of the updated requirements for the 2023 NEVI Plan Updates.
- Public comment and question and answer.¹⁰

Over 150 partners representing the charging industry, vehicle OEMs, utilities, ports, environmental groups, community-based organizations, and government agencies participated in the workshop. There was praise for the tri-state truck charging project application as it will help address the need for zero-emission truck charging and fueling in California and along the West Coast if funded. This echoed a major theme in comments on the 2022 NEVI Plan around the need for charging infrastructure for medium- and heavy-duty vehicles. Many partners continued to encourage Caltrans and the CEC to begin using NEVI funds for medium- and heavy-duty vehicle infrastructure projects before the initial rounds of light-duty charging solicitations have been released.

Several questions and concerns about the North American Charging Standard (NACS) were raised. Some partners urged adoption of the NACS as a replacement for the Combined Charging System (CCS) standard, while others asked about the specific technical requirements for chargers funded under the NEVI Formula Program. The NEVI team confirmed that the technical requirements for CCS connectors remain unchanged, which is consistent with recent guidance from the FHWA and the Joint Office. California continues to engage with vehicle manufacturers and charging station providers, monitor public announcements, and intends to take a measured near- and long-term approach with regards to NACS and CCS in compliance with federal requirements.

Caltrans and the CEC asked for comments on the level of satisfaction with the state's public outreach and engagement efforts for NEVI; no specific responses or critiques were provided.

¹⁰ California Energy Commission. (2023, June 29). [Joint Workshop on the Development of the 2023 Update to California's Deployment Plan for the National Electric Vehicle Infrastructure Program](#).

Community Engagement Outcomes Report

Public and community engagement is a core theme in Caltrans' and the CEC's approach to developing and implementing the NEVI Formula Program and NEVI Plan Updates. The CEC and Caltrans have designed the NEVI outreach efforts to ensure that all partners involved with and affected by the NEVI Formula Program have an equal opportunity to understand the state's intent, process, and goals for planning, designing, constructing, and operating the NEVI-funded DC fast charging stations. One goal is to ensure equitable access and competitiveness for partners seeking to bid on NEVI-funded projects. Another goal is to provide sufficient information to partners concerned about the location or configuration of specific station proposals and create an opportunity for such concerns to be voiced in a meaningful and effective manner. A third goal is to gather input to maximize community benefits of NEVI projects.

The methods for this notification and outreach include:

- Broadly advertised public workshops using the multi-thousand partner listservs developed for the CEC's CTP, which is the state's designated program for charging infrastructure funding and development.
- Communication about both agencies' policy positions and commitment to diversity and equity.
- Focused outreach to organizations representing disadvantaged communities.
- Leveraging the existing tribal outreach and consultation programs developed by Caltrans and the CEC.
- Targeted, direct outreach to specific partners on select topics.

Due to California's large size, public workshops are the primary tool used to communicate our agencies' intent and plans for the NEVI Formula Program. By state law, each public workshop must be publicly noticed 10 days in advance of a workshop. Each notice must include the workshop agenda, directions on how to access and participate in the workshop's virtual presentations, directions on how to file written comments, and instructions on how to contact the CEC Public Advisor's Office for any needed assistance.

As described above, the CEC and Caltrans have hosted three public workshops since the first NEVI Plan was filed in August 2022 and will host a fourth after the initial solicitation is released in Q3 2023.

Outreach to Disadvantaged Communities

For engagement and consultation with representatives of disadvantaged communities, the CEC obtains input from its Disadvantaged Communities Advisory Group (DACAG),¹¹ the legislatively created body that advises the CEC on energy issues in California. During the first NEVI Plan and during development of the tri-state Charging and Fueling Infrastructure (CFI) truck charging and hydrogen fueling application, the CEC and Caltrans staff worked directly with the DACAG Transportation Electrification Subcommittee to present NEVI Plan and CFI project concepts and to solicit feedback and recommendations. Thus far, the primary recommendation has been to allocate NEVI funding to truck charging as soon as possible.

CEC staff provided an update on the 2023 NEVI Plan to the full DACAG on July 21, 2023. The DACAG members expressed support for California's NEVI planning process and for the CFI truck charging project application. The DACAG members repeated their recommendation that NEVI formula funding be shifted to heavy-duty truck charging in order to relieve local residents of the emissions and pollution burden from diesel trucks.

The CEC and Caltrans continue to meet with partners in one-on-one meetings, which are generally at the request of partners. Over the next year, Caltrans will pursue engagement opportunities with members of the newly established Interagency Transportation Equity Advisory Committee, co-organized with CalSTA and the California Transportation Commission (CTC).

Tribal Engagement

California is home to 109 federally recognized Native nations with nearly 100 reservations and Rancherias. Caltrans and the CEC have a similar process for consultation with California tribes; Caltrans works through its Native American Advisory Committee (NAAC), and the CEC works through its Office of Public Advisor, Energy Equity, and Tribal Affairs.

In 1996, the NAAC was established at Caltrans to ensure the Department receives direct advice from tribal governments on issues pertaining to all modes of transportation within California. The NAAC meetings further government-to-government working relationships and provide an opportunity to share information. Members of the NAAC advocate for all Native Americans of California and are nominated by tribes and Native organizations.

As part of ongoing efforts to strengthen relations and collaboration with California tribes on energy issues, the CEC and the CPUC hosted the first-ever *en banc* meeting in early March 2023. The meeting participants included 10 Commissioners from the CEC and the CPUC, including the CEC's chair and the CPUC's president, and tribal leaders from

¹¹ The DACAG was established by Senate Bill 350 (de León, Chapter 547, Statutes of 2015), the Clean Energy and Pollution Reduction Act of 2015.

12 tribes including the Yurok, Hoopa, Blue Lake Rancheria, and Chemehuevi. An important outcome of the *en banc* meeting was adoption of a resolution to support California tribal sovereignty and independence.¹² Remarks from the meeting include:

"We're here because tribal energy sovereignty is a priority, tribal engagement is a priority, and tribal partnerships are a priority. We cannot build the future we need without first facing the past that we've shared." – CEC Chair David Hochschild

"This is a historic moment. The California Energy Commission's support for tribal energy sovereignty and independence is good for us and it sets a strong precedent for all of Indian Country. I look forward to working with the CEC on the development of the tribal energy policy. The policy will empower and strengthen tribes across the state." – Chairman Joseph L. James, Yurok Tribe¹³

On May 4, 2023, the CEC followed up from the *en banc* session and hosted a focused Tribal Listening Session to support the deployment of reliable, resilient ZEV infrastructure in tribal nations.¹⁴ The CEC and Caltrans will require NEVI applicants to explain how their project impacts tribal nations.

Utility Engagement

The CEC works closely and regularly with California's public and investor-owned utilities (IOUs) on a wide range of energy and grid topics, often in collaboration with the CPUC. The CEC also works with trade organizations like the California Electric Transportation Coalition, a consortium of the state's major utilities and EV charging companies, and the West Coast Clean Transit Corridor Initiative, a consortium of the major West Coast utilities working on truck charging issues.

The CEC's Integrated Energy Policy Report (IEPR) is a legislatively required biennial report to the Governor and State Legislature on state energy topics. The 2023 IEPR focuses on utility interconnection, energization, and the distribution grid including, but not limited to, renewable energy projects and with EV charging stations. Interconnection and energization timelines for energy projects can exceed two years for larger projects and/or those on constrained circuits.

¹² California Energy Commission. (2023, March 6). [CEC Adopts Resolution Supporting California Tribal Energy Sovereignty](#).

¹³ *Ibid.*

¹⁴ California Energy Commission. (2023, May 4). [Tribal Listening Session — Concepts for a Zero-Emission Vehicle Infrastructure Tribal Funding Opportunity](#).

The 2023 IEPR Scoping Order focuses on:

“Accelerated Connection of Clean Energy: The focus of the 2023 Integrated Energy Policy Report (2023 IEPR) is to identify barriers and solutions to accelerate the connection (including interconnection, energization, and associated system upgrades) of clean energy technologies with the electric grid. The report will consider both transmission and distribution systems and the CEC will coordinate with ongoing proceedings at the CPUC and California Independent System Operator...Examples of clean energy technologies that will require rapid deployment and integration include but are not limited to:

- *Grid-scale low-carbon generation, storage, and community solar.*
- *Zero-emission vehicle fueling infrastructure.*
- *Distributed energy resources and microgrids.*
- *Decarbonized buildings and widespread load flexibility.”¹⁵*

Electrify America commented on the 2023 IEPR Scoping Order stating that the utility interconnection planning process requires nine months while the average time to energize a completed charger station is seven months. Volvo Group North America and ProLogis commented that timely utility interconnections for new truck charging projects will be essential for California trucking fleets to meet the electrification requirements established through the Advanced Clean Truck and Advanced Clean Freight rules adopted by CARB.¹⁶

The CPUC is working to support and direct California IOUs to keep pace with the growing number of new EV charging stations planned and being developed in California. CPUC Resolution E-5247, issued in December 2022, sets a 125-day target for site interconnection energizations under 2 megawatts.¹⁷ CPUC staff have started a similar proceeding focused on truck charging requirements and challenges in order to facilitate transportation electrification in the truck sector.¹⁸

¹⁵ California Energy Commission. [2023 Integrated Energy Policy Report](#).

¹⁶ *Ibid.*

¹⁷ California Public Utilities Commission. [Distribution Infrastructure and Planning to Support EV Charging](#).

¹⁸ California Public Utilities Commission. [Freight Infrastructure Planning](#).

Site-Specific Public Engagement

As of August 1, 2023, the CEC and Caltrans have not hosted site-specific public or private meetings for the state's NEVI Formula Program. All public engagement has occurred through virtual, state-level public workshops. Small group meetings with DACAG members and their constituents have been held virtually. The CEC generally conducts site-specific meetings after a grant award is issued. On-site meetings are often held to discuss and review planning, construction, interconnection, and commissioning issues.

Plan Vision and Goals

California is committed to reducing emissions from the transportation sector by increasing the adoption of ZEVs. Through legislation, regulatory action, and Executive Orders, California is making the transition across market segments ranging from passenger cars to heavy-duty trucks.

On September 23, 2020, Governor Gavin Newsom signed Executive Order N-79-20, setting the following zero-emission vehicle targets for California:

- 100 percent of in-state sales of new passenger cars and light-duty trucks will be zero-emission by 2035;
- 100 percent zero-emission medium- and heavy-duty vehicles operating in the state by 2045, where feasible, and by 2035 for drayage trucks, and;
- 100 percent zero-emission off-road vehicles and equipment operations by 2035.

To support widespread adoption of EVs, California is striving to deploy 250,000 public and shared-private electric vehicle chargers by 2025 and forecasts the need for 1.2 million chargers by 2030 for light-duty vehicles, including 37,500 DCFCs, and 157,000 chargers for medium- and heavy-duty vehicles.¹⁹ The light-duty target includes public chargers, such as those at parks, shopping centers, hotels, public buildings, etc., and shared-private electric vehicle chargers, such as those at workplaces and multi-unit dwellings.

Public funding, electric utility investment, and private investment have contributed to California's ZEV charging infrastructure networks and all will continue to be essential to meeting future deployment goals. Funding through the NEVI Formula Program will be necessary to build out the state's EV corridors and will be complemented by state funding.

¹⁹ California Energy Commission. (2021). [Assembly Bill 2127 Electric Vehicle Charging Infrastructure Assessment](#).

California's strategy to deploy an interconnected network of EV charging infrastructure will facilitate data collection and support the development of convenient, accessible, reliable, and equitable EV charging.

1. **Data Collection:** Operators of NEVI-funded stations will be required to collect and transmit all operational and maintenance data as defined in 23 CFR §680.112 and §680.116(c). Operational data will be collected and transmitted on a quarterly basis while maintenance data will be collected and transmitted annually. These requirements will be part of grant agreements' statement of work. All data will be transmitted to the FHWA according to federal guidelines.
2. **Equitable Access:** All NEVI-funded stations will be fully accessible and available to all users. All stations will be compliant with the Americans with Disabilities Act, have non-discriminatory payment options in line with federal requirements, and will feature safety lighting and accessible restrooms.

California will continue to engage with communities, including disadvantaged, underserved, and rural communities, through workshops and outreach to ensure equitable and collective decision-making in solicitation design and program implementation. This will ensure charger installations are meeting the needs of the communities they serve while providing seamless statewide access. See the Equity Considerations Section of the Plan Update for an overview of how California will prioritize equity and track benefits to communities.

3. **Network Reliability:** NEVI-funded projects will conform to the reliability requirements of 23 CFR Part 680. The solicitation process will require funding recipients to report the data required to the CEC, who will then report it to the FHWA. In addition to meeting these minimum requirements, the CEC will include additional reliability requirements in the state's first NEVI solicitation. Funding recipients will be required to:
 - Collect and retain records of the following remote monitoring data:
 - Charger operative status using OCPP 2.0.1.
 - Each charge attempt.
 - Each failed charging session and reason for failure.
 - Generate and retain maintenance records for all preventive and corrective maintenance conducted on chargers.
 - Generate and retain records of inoperative charging ports.
 - Conduct annual preventive maintenance on all chargers and charging ports.
 - Conduct corrective maintenance within 10 business days.

These additional requirements will further ensure that chargers installed and operated with NEVI funds will be well maintained and meet the requirements of 23 CFR Part 680. Applicants will be required to report data for a minimum of 6 years from when the charger is first operational.

Governor Newsom signed Assembly Bill 2061 (Ting, Chapter 345, Statutes of 2022) in September of 2022. This bill requires the CEC to establish uptime recordkeeping and reporting requirements for chargers funded through an incentive by a California state agency or an expense to ratepayers. The CEC is in the process of developing a regulation pursuant to Assembly Bill 2061.²⁰ The requirements of this regulation will align with, and add to, the uptime reporting requirements of 23 CFR Part 680 with minimal variances. There are provisions under consideration to allow chargers funded through the NEVI Formula Program to submit federal reporting requirements in lieu of requirements specific to Assembly Bill 2061.

Contracting

Through the CTP, the CEC has awarded over \$1 billion in grant funding for ZEV infrastructure projects through competitive solicitations and first-come-first-served projects. In 2015 and 2016, the CEC funded its first large scale corridor charging program for passenger vehicles. California intends to utilize the CEC's grant solicitation experience to administer funding under the NEVI Formula Program.

California will continue to use the contracting method described in the original NEVI Plan. The NEVI agencies will use multiple competitive solicitations to award funding to install the necessary minimum number of charging stations and charging ports within the designated corridor groups. Awardees will be responsible for:

- Locating and securing access rights to charging station locations;
- Designing and engineering the charging stations; and
- Constructing, operating, and maintaining the charging stations.

Awardees may contract any aspect of their responsibilities but will remain the party responsible to the CEC for assuring all NEVI regulations and requirements are met during the design, construction, and operation phases.

Each application will be evaluated on multiple criteria including, but not limited to Project Readiness, Budget and Finances, Team Experience and Resources, Operations and Maintenance, and more. Applicants will be required to submit an Operations and Maintenance Plan as part of the application package, which will be evaluated in the scoring process.

CEC staff provided information on how the corridors would be ranked and how applications would be scored during the September 2022 technical workshop and the June 2023 NEVI Plan Update workshop. The next paragraphs summarize that information.

²⁰ California Energy Commission. [Electric Vehicle Charging Infrastructure Reliability and Data Standards](#).

As described, the 6,600 miles of AFCs in California have been divided into 21 corridor groups, each with 4 to 8 stations. Each corridor was ranked using a series of metrics related to Justice40, tribal lands, and projected charger demand. Table 1 shows the top-six corridor groups that will be eligible for bids during the first solicitation. Figure 2 shows all 21 corridors groups on the interactive mapping tool described earlier. Figure 3 is a more detailed map for Corridor Group 1 and Table 2 provides details of the number of stations and chargers to be required for segments within Corridor Group 1. Similar maps and tables have been developed for all 21 corridor groups and were presented at the September 2022 technical workshop.

Table 3 shows the nine factors used to rank corridor groups for the first solicitation. One factor relates to whether the corridor group includes an Interstate. Another factor relates to demand for chargers in 2030, estimated using the CEC's EVI-RoadTrip Model.²¹ Three factors relate to Justice40 and state-defined disadvantaged and low-income communities, while a fourth factor relates to the presence of tribal lands. Other factors address rural communities and areas with existing chargers spaced further than 50 miles apart. The criteria for ranking corridors were areas the CEC and Caltrans sought input from stakeholders at the September 2022 technical workshop.

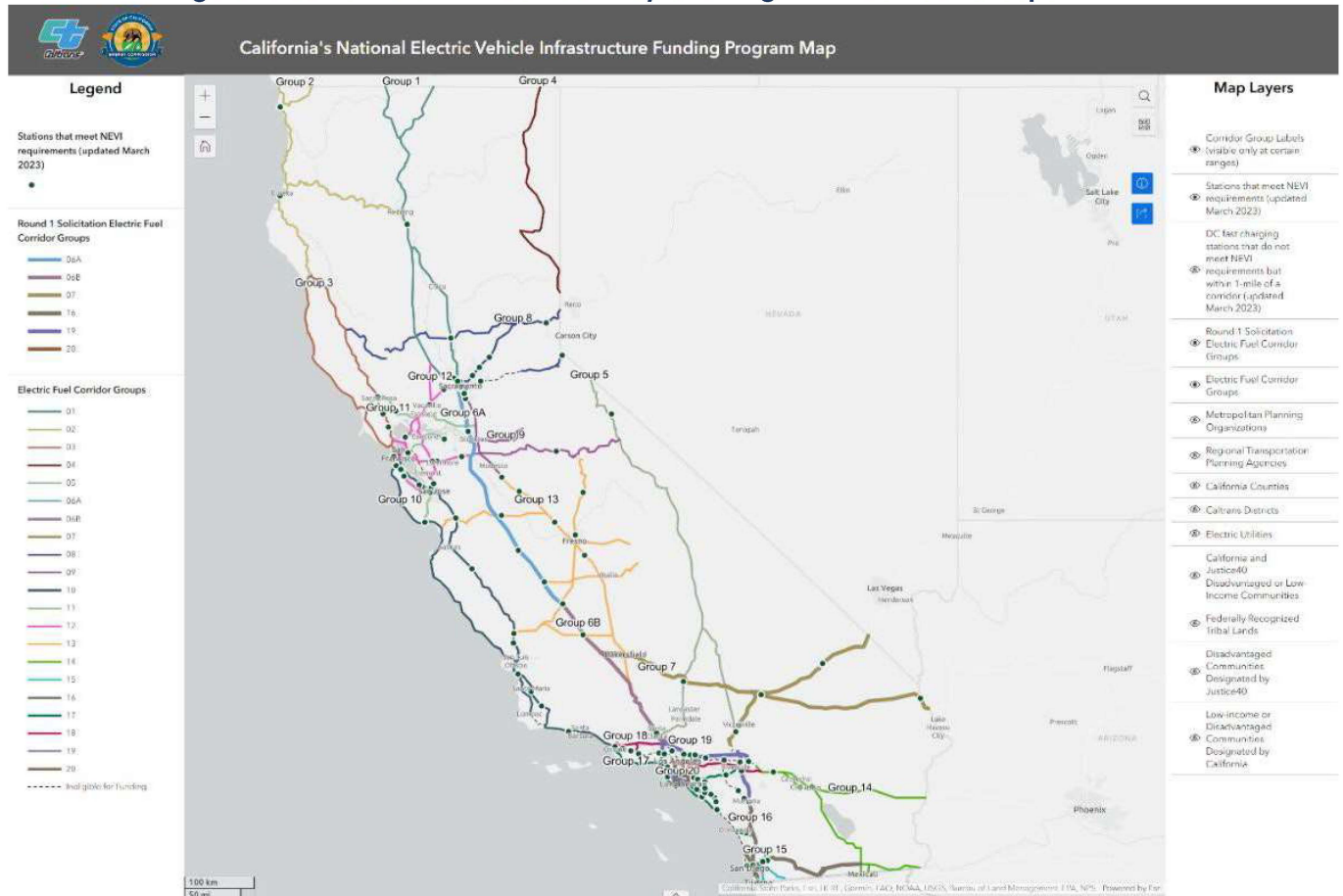
Table 1: The Top-Six Ranked Corridor Groups Eligible for Round 1 Solicitation

Corridor Groups	Corridor Segments	Minimum New Stations	Total New Charging Ports
6A	I-5: South of Sacramento to Kettleman City	2	67
6B	I-5: South of Kettleman City to Santa Clarita	2	87
7	SR 58: Buttonwillow to Barstow	4	16
	I-15: Hesperia to Nevada	2	45
	I-40: Barstow to Needles	2	12
16	I-8: San Diego to El Centro	2	8
	I-15: San Diego to Murrieta	2	8
	I-805: San Diego to San Ysidro	1	4
19	I-210: Sylmar to Redlands	2	8
	I-215: Murrieta to San Bernardino	2	8
	I-405: Mission Hills to Irvine	1	4
20	I-110: Los Angeles to San Pedro	2	8
	I-710: Los Angeles to Long Beach	2	8
	I-605: Irwindale / Duarte to Seal Beach	1	4
	I-105: El Segundo to Norwalk	1	4

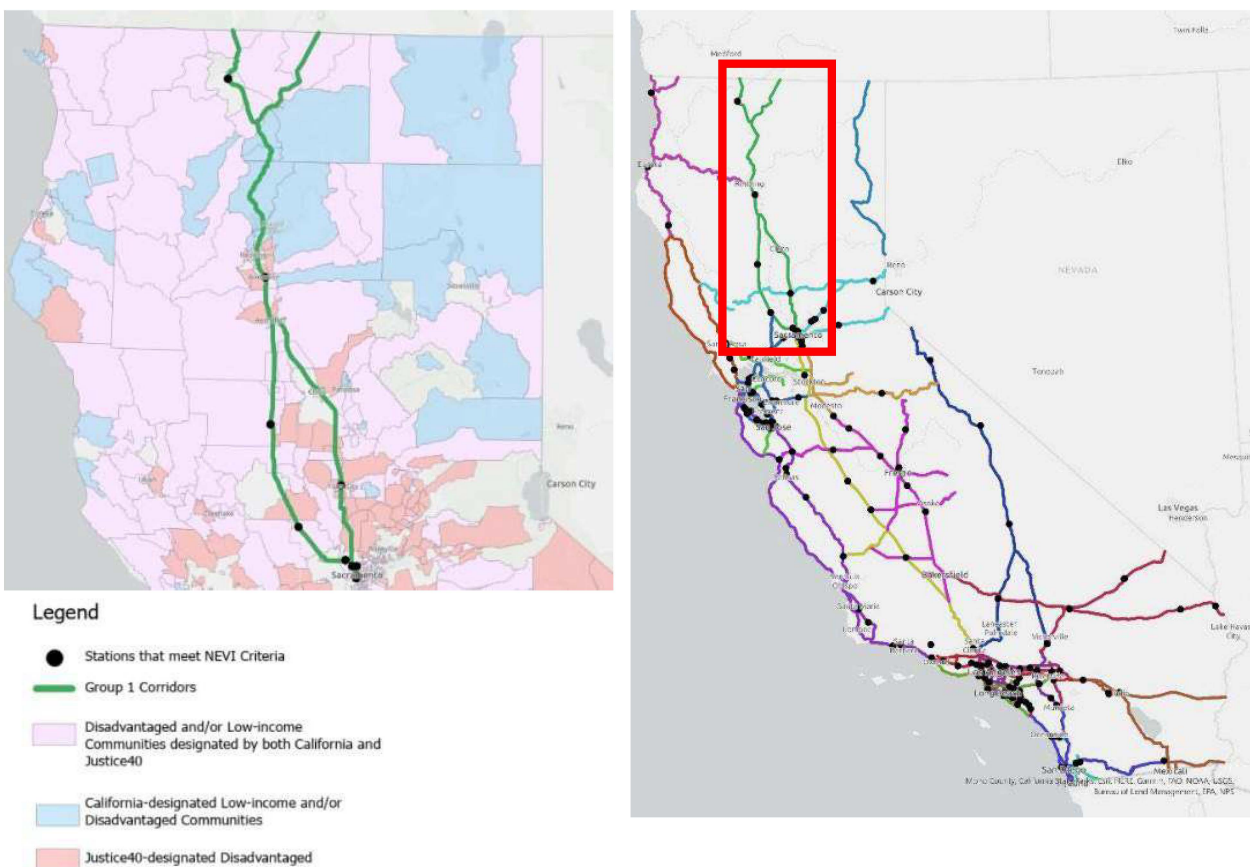
Source: CEC – Caltrans Joint NEVI Workshop, June 29, 2023

²¹ California Energy Commission. (2021). [Electric Vehicle Charging Infrastructure Assessment – Assembly Bill 2127](#).

Figure 2: California's NEVI Corridor Map Showing All 21 Corridor Groups



Source: California's National Electric Vehicle Infrastructure Funding Program Map

Figure 3: Sample Corridor Group Map (Corridor Group 1)

Source: CEC – Caltrans Joint Workshop, September 8, 2022

Table 2: Sample Corridor Group Segments (Corridor Group 1)

Group Corridor Segments	Min. # of New Charging Stations	Number of New Chargers	Required Sites
I-5: Oregon to Sacramento	3	36	-
SR 97: Weed to Dorris	2	8	I-5, SR 97 Split (Weed)
SR 99: Red Bluff to Sacramento	2	8	I-5, SR 99 Split (Red Bluff) and Chico
Group Total:	7	52	

Source: CEC – Caltrans Joint Workshop, September 8, 2022

Table 3: Ranking Formula and Factors for California's First NEVI Solicitation

Variable	Factor	Score
Corridor segment is an Interstate	Yes	25
	No	0
Percentage of the corridor segment that is in and within 1 mile of a Justice40 DAC	100%	10
	75% - 99%	8
	50% - 74%	6
	25% - 49%	4
	0% - 24%	0
Percentage of the corridor segment that is in and within 1 mile of a CA-designated DAC/LIC	100%	10
	75% - 99%	8
	50% - 74%	6
	25% - 49%	4
	0% - 24%	0
At least 50 percent of the corridor segment is in and within 1 mile of both Justice40 DAC and/or CA-designated DAC/LIC	Yes	5
	No	0
Number of 150 kW, or greater, DCFCs needed along the corridor segment (EVI-RoadTrip 2030)	40+	20
	20-39	10
	11-19	8
	6-10	6
	1-5	4
	≤ 0	0
Additional charging stations needed to comply with the maximum 50-mile distance between charging stations	7	7
	6	6
	5	5
	4	4
	3	3
	2	2
	1	1
	0	0
Percentage of the corridor segment that is in a community that is greater than 10 minutes away from an existing DCFC (\$B 1000)	90-100%	4
	75% - 89%	3
	50% - 74%	2
	25% - 49%	1
	0% - 24%	0
Corridor segment has at least 1 tribal land or tribal property	Yes	1
	No	0
Corridor segment connects to neighboring State's AFC	Yes	1
	No	0
Max points:		83

Source: CEC – Caltrans Joint Workshop, September 8, 2022

Contractor Engagement with Local Communities

Contractors' engagement with local communities may occur throughout a NEVI project, including during site selection and design that occur before an application is submitted. Engagement with local agencies will also occur during the permitting phases of NEVI projects. In addition to any needed local permits, each bid must also include a Signage Plan, which identifies how informational and locator signs could be installed for each project. As they develop their Signage Plans, prime contractors will be obligated to work with local agencies. The Matchmaking Tool is also intended to enable positive interactions between prime contractors, local contractors, local agencies, and communities.

Status of Contracting Process

At the time of writing, California is finalizing its first funding solicitation under the NEVI Formula Program, which builds off the CEC's work to fund DCFCs along highway corridors since 2016. The first funding solicitation is planned to be released by Q3 2023. Additional solicitations are expected to be released every six months. Awards from the first solicitation are expected to be executed in Q2 2024.

Awarded Contracts

There are currently no awarded contracts under California's NEVI Program. The first awards are expected to be made in Q2 2024. It is expected that awards will utilize the design-build-operate-maintain contracting mechanism. The funding solicitation details that the awardee is fully responsible for identifying, securing, designing, constructing, operating, and maintaining each charging station. The awardee may contract out certain aspects, but remains fully responsible for compliance with 23 U.S.C., 23 CFR Part 680 and all applicable requirements under 2 CFR Part 200.

Scoring Methodologies Utilized

Each funding solicitation will be scored competitively on multiple factors. Each evaluation criterion will have several questions and topics which the applicants will have to address in their application. The first funding solicitation's evaluation criteria will include categories on Charging Station Design, Project Readiness, Operations and Maintenance, Team Experience and Qualifications, Expected Project Benefits, Innovation and Sustainability, Project Budget and Finances, and Cost. Each evaluation criterion will have a set number of possible points and will be evaluated by an evaluation team comprised of multiple members, all with subject matter expertise.

Plan for Compliance with Federal Requirements

The funding solicitation manual will specify that the applicants who are issued awards will be responsible for documenting and proving compliance with 23 U.S.C., 23 CFR Part 680, and all applicable requirements under 2 CFR Part 200. Awardees that fail to document compliance will not be reimbursed for expenses incurred.

Civil Rights

In alignment with Title VI, California is dedicated to increasing the participation of Small Business, Disadvantaged Business Enterprise, and Disabled Veteran Business Enterprise firms. Disadvantaged Business Enterprises are for-profit, small businesses where socially and economically disadvantaged individuals own at least a 51 percent interest and also control management and daily business operations. African Americans, Hispanics, Native Americans, Asian-Pacific and Subcontinent Asian Americans, and women are considered socially and economically disadvantaged. Other individuals can also qualify as socially and economically disadvantaged on a case-by-case basis. The definition of a small business varies by industry.

The US DOT's Disadvantaged Business Enterprise Program's policy goal is to remedy ongoing discrimination and the continuing effects of past discrimination in federally-assisted transportation programs. The NEVI Program Guidance, however, indicates that states may not establish Disadvantaged Business Enterprise goals for NEVI-funded contracts, "...because the NEVI Formula Program concerns funding for a new contracting industry which Congress has not made a finding with respect to the existence of discrimination in the contracting markets associated with the work funded by such grants."²²

EV chargers funded under California's NEVI Program will be available for use by the general public and must be accessible to individuals with disabilities. Compliance with the Americans with Disabilities Act regarding EV charging stations is primarily defined in Section 11-B of the California Building Code.²³ This code sets a minimum number of van and standard vehicle accessible spaces given the total number of chargers at a facility. The building code also specifies the requirements for an accessible path of travel to and from the charger, configurations for parking spaces, and EV charger requirements. All chargers and charging cords must comply with reach range and operable parts requirements.

²² Federal Highway Administration. (2023, June 21). [National Electric Vehicle Infrastructure \(NEVI\) Formula Program Q&A](#).

²³ CALeVIP. (2023). [Guide to California Regulations for Electric Vehicle Charging Stations](#).

Existing and Future Conditions Analysis

California Geography and Terrain

No major changes have occurred to California's geography or terrain. Please see the 2022 NEVI Plan for a complete description.

California ZEV Sales Update

In the last year, California has made considerable progress towards the goal of transportation electrification. Over 343,000 electric vehicles were sold in 2022,²⁴ and over 1 million electric vehicles are on the road. Cumulative ZEV sales in California through Q1 2023 surpassed 1.5 million vehicles, achieving the Governor's 2025 policy goal of 1.5 million ZEV sales two years ahead of schedule.²⁵

CARB adopted two major ZEV policies since the 2022 NEVI Plan that will increase ZEV sales in California: (1) the Advanced Clean Cars II Rule in August 2022, which sets ZEV sales standards for passenger vehicles, increasing from 35 percent for model year 2026 to 100 percent for model year 2035 and beyond, and (2) the Advanced Clean Fleets Rule in April 2023, which sets ZEV purchase standards for fleets operating medium- and heavy-duty vehicles in California as well as a 100 percent ZEV sales standard for medium- and heavy-duty vehicles beginning in model year 2036.

Market Conditions

California continues to have the most dynamic ZEV market in the country, accounting for 40 percent of all ZEV sales nationally.²⁶ In 2022, Tesla was the second highest selling brand overall in California with 11.2 percent market share. Toyota continued to be the state's highest selling brand with 17.3 percent market share while Honda was number three with 8.9 percent market share. In Q1 2023, ZEV sales reached 21 percent of all light-duty vehicle sales in California. The Tesla Model 3, Model Y, and Model S were the top selling vehicles in their class, outcompeting their fossil-fueled counterparts.²⁷ In Q2 2023, Tesla was the top-selling brand of all automakers in California, with 69,212 vehicles sold compared to Toyota's 67,482.²⁸ California's Clean Vehicle Rebate Project now lists 18 eligible automakers with 40 ZEV models.²⁹

In terms of manufacturing, "Electric vehicles were the number one California export in 2020. California is also home to more than 360 companies with 70,000 employees that

²⁴ Veloz. (2023, April). [EV Market Report](#).

²⁵ Office of Governor Newsom. (2023, April 21). [California Surpasses 1.5 Million ZEVs Goal Two Years Ahead of Schedule](#).

²⁶ Office of Governor Gavin Newsom. (2023, January 20). [California ZEV Sales Near 19% of All New Car Sales in California in 2022](#).

²⁷ California Energy Commission. [New ZEV Sales in California](#).

²⁸ California New Car Dealers Association. (2023, July). [California Auto Outlook](#).

²⁹ California Clean Vehicle Rebate Project. (2023, July 20). [Rebate Statistics](#).

work on zero-emission transportation, including vehicles, components, infrastructure, and research. California has is home to 55 ZEV, ZEV component, and ZEV infrastructure companies, including 19 companies that manufacture ZEV infrastructure products."³⁰ There are also about 20 EV charging providers that operate in California.

Climate

Substantial rains in late 2022 and early 2023 ended three years of extreme drought for most of California³¹ and most of the state's reservoirs were at or near capacity by the end of June 2023.³² These storms resulted in more than \$1 billion in damage to the state highway system. California remains vulnerable to future droughts as climate change is expected increase the variability of variable weather patterns, including longer and more severe droughts and floods.³³ Severe droughts have been a precursor to the state's recent and massive wildfires.

Freight

By the end of 2022, there were over 2,300 medium- and heavy-duty zero-emission vehicles registered in California, comprised of 1,700 transit and school buses and 600 trucks and delivery vans.³⁴ Approximately 2,200 of those were battery electric vehicles and 130 were fuel cell electric vehicles.

As described earlier, in April 2023, CARB adopted the Advanced Clean Fleets Rule, a zero-emission vehicle purchase standard for medium- and heavy-duty fleets. This policy is part of CARB's overall approach to accelerate a large-scale transition to zero-emission medium- and heavy-duty vehicles. The Advanced Clean Fleets policy focuses on public and high-priority private fleets with vehicles that are suitable for early electrification, their subhauers, and the entities that hire them. The goal of this policy is to transition all medium- and heavy-duty vehicles on the road in California to zero-emission technologies, where feasible, by 2045. The Advanced Clean Fleets standard also includes a first-of-its-kind requirement that all sales of medium- and heavy-duty vehicles in California must be of zero-emission vehicles by 2036.

A CARB analysis of the impact of the Advanced Clean Trucks (adopted in June 2020) and Advanced Clean Fleets policies estimates that California will have at least 190,000 zero-emission medium-duty and heavy-duty trucks on the roadways by 2030.³⁵ In July 2023, Caltrans submitted its latest update of the California Freight Mobility Plan (CFMP) to the FHWA. The CFMP is a comprehensive plan that governs the immediate and long-range planning activities and capital investments by the state with respect to

³⁰ California Energy Commission. [Zero-Emission Vehicle Related Manufacturing](#).

³¹ Riganti, C. (2023, April 25). [U.S. Drought Monitor](#).

³² California Department of Water Resources. (2023). [Current Conditions: Major Water Supply Reservoirs](#).

³³ California Department of Water Resources. [Climate Change and Water](#).

³⁴ California Energy Commission. [Zero-Emission Vehicle and Infrastructure Statistics](#).

³⁵ California Air Resources Board. (2023, May 17). [Advanced Clean Fleets Regulation Summary](#).

freight movement. This includes an analysis of the needed infrastructure, projects, and operations for the deployment of zero-emission medium- and heavy-duty vehicles and the development of freight corridors. The CFMP includes strategies that the state is committed to employing to support infrastructure for zero-emission medium- and heavy-duty vehicles. Caltrans also continues to organize interagency meetings related to the implementation of the California Sustainable Freight Action Plan (adopted in 2016), including actions supporting zero-emission freight activities.³⁶

In June 2023, Caltrans, the CEC, Oregon Department of Transportation, and Washington State Department of Transportation submitted an application to the US DOT's Charging and Fueling Discretionary Grant Program to support charging and hydrogen fueling infrastructure for trucks from Mexico to Canada along Interstate 5 and corridors connecting to key port and freight centers along the West Coast. The *West Coast Truck Charging and Fueling Corridor Project* proposes 34 charging stations and five hydrogen fueling stations for trucks in California, Washington, and Oregon. Currently, there are just four publicly accessible charging stations and three hydrogen fueling stations supporting zero-emission trucks on the West Coast.

Partners continue to express support for using NEVI Formula Program funds to build infrastructure for medium- and heavy-duty vehicles. Caltrans and the CEC are committed to supporting the significant need for ZEV infrastructure for these vehicles and will continue to evaluate opportunities to use NEVI Formula Program funds for this purpose with consideration given to the outcome of the tri-state CFI application and other investments from the CEC, CalSTA, the CTC, and Caltrans.

California's Electric Grid

California is undertaking grid and transmission planning to account for increasing electrification of the building and transportation sectors, with an eye towards policies that will encourage grid-friendly load growth. New electric load from ZEVs has steadily increased in recent years and will increase over the coming decades but is expected to add only a small amount of electricity demand to California's grid over the next decade.

³⁶ California Department of Transportation. (2016). [California Sustainable Freight Action Plan](#).

A recent “Additional Transportation Electrification” scenario adopted in May 2022 by the CEC for planning, shows expected grid impacts from EVs. In 2030, the scenario's 5.3 million light-duty EVs and 187,000 medium- and heavy-duty electric vehicles will account for less than 5 percent of total system electric load during peak hours. Today's electric vehicle population accounts for less than 1 percent during the same peak period in 2022. California is actively bringing and keeping clean energy resources online and working to ensure our electric system continues to keep pace with growing EV loads. Ongoing analysis, planning, and investments will ensure our grid is prepared. This will include investing in new resources and strategies such as time-of-use rates, storage, and vehicle-to-grid integration.

California's Electric Utilities

California has over 80 electric utilities, including investor-owned utilities (IOUs), public utilities, community aggregators, and rural electric co-ops.³⁷ These utilities vary widely in their size and service territories. The six private utilities include three large IOUs, Pacific Gas and Electric, Southern California Edison, and San Diego Gas and Electric, and several community-sized companies like Bear Valley Electric Service. The 45 public utilities also vary in size, ranging from the large Los Angeles Department of Water and Power and the Sacramento Municipal Utility District to scores of small, community-based utilities. There are 25 community choice aggregators and four rural electric cooperatives.

Known Risks and Challenges

The multiple risks and challenges to deploying EV chargers at scale include risks with the business model used by electric vehicle service providers lack of consumer awareness, delays in supply chains, and utility interconnection timelines. Another major risk is the public's perception of poor charger reliability, which could impede widespread consumer adoption of ZEVs.

One set of challenges is associated with the business model for deploying infrastructure, especially in advance of vehicle adoption. Utilization rates, especially early on, may not be high enough to provide a return on investment for electric vehicle service providers. To mitigate this, public funding, including NEVI Formula Program funding, is essential to bridging this gap. California's NEVI Program is designed to encourage grant applicants to bring forward match share funding and to minimize the amount of public funding requested. This is achieved through applications' evaluation criteria.

³⁷ California Energy Commission. [Electric Load-Serving Entities in California](#).

A second set of challenges is associated with elements of charger installation. These include supply chain challenges, permitting, utility interconnection, and a trained and available workforce. Anecdotal evidence suggests that supply chain challenges, common in many parts of the economy, are delaying delivery of electric vehicle supply equipment (EVSE). As installation of charging stations increases around the country, under NEVI and other programs, supply chain disruptions and shortages of EVSE and EVSE components could delay installation.

Lengthy utility interconnection and energization timelines is a known challenge. Electrify America has identified utility interconnection costs and timelines as a barrier to DCFC deployment, stating that as of the end of Q3 2021, the new service utility interconnections averaged nearly nine months in California.³⁸ East Bay Community Energy, a large community choice aggregator that serves multiple Bay Area cities, commented that, "Interconnection delays, ranging from months to years, harm residents, businesses, local job creation and economic development efforts, and state and local economies."³⁹ Measures by the CPUC to track and decrease interconnection timelines are described earlier.

Finally, reliability of the EVSE network and of stations has been identified as an increasing concern, especially as the vehicle market grows beyond early adopters to mainstream consumers. To mitigate this risk, the CEC is taking steps to track and measure the reliability of stations. As described earlier, policies being developed under the Assembly Bill 2061 rulemaking on charger reliability, in addition to requirements under the NEVI Formula Program, should greatly increase charger reliability and accountability.

Alternative Fuel Corridor Designations

California continues to make progress building critical infrastructure along interstates and State Routes. A total of 17 California corridors received "Corridor-Pending EV" designations in the Round 6 (2022) AFC process.

In the Round 7 Request for Nominations (2023), 21 highway segments were nominated for EV AFCs in California (Figures 4-6, and Tables 4 and 5) and 14 highway segments were nominated for Freight EV corridors to support medium- and heavy-duty EVs (see below). Designation of these routes will increase opportunities for clean transportation in California. Tables 6 and 7 summarize the EV Corridor Pending and EV Corridor Ready designations of Rounds 1-6 of the AFC process.

³⁸ California Energy Commission. (2023, March 17). Electrify America comments on [2023 IEPR Scoping Order](#).

³⁹ California Energy Commission. (2023, March 24). East Bay Community Energy comments on [2023 IEPR Workshop on Distribution Grid Clean Energy Interconnections](#).

The Round 7 nominations placed emphasis on rural, disadvantaged, and tribal regions within California. Nearly all the nominated AFC corridors are in or adjacent to disadvantaged communities as determined by CalEnviroScreen and the Justice40 Initiative.⁴⁰ An extensive intra- and inter-state network will increase the ability of consumers and businesses to charge their vehicles within and outside of their home and work communities.

Figure 4: Designated and Round 7 Nominated Alternative Fuel Corridors for Electric Vehicles



⁴⁰ [CalEnviroScreen](#), an analytical tool created by the California Environmental Protection Agency, combines different types of census tract-specific information into a score to determine which communities are the most burdened or “disadvantaged.” The [Electric Vehicle Charging Justice40 Map](#) displays federally designated Justice40 communities, Alternative Fuel Corridors, and existing public EV chargers.

**Figure 5: Designated and Round 7 Nominated Alternative Fuel Corridors for Electric Vehicles
(Selected Zoom of Northern California)**



**Figure 6: Designated and Round 7 Nominated Alternative Fuel Corridors for Electric Vehicles
(Selected Zoom of Southern California)**



Table 4: Round 7 Alternative Fuel Corridor Nominations – EV Corridor Pending

Corridor	Miles	Start	End
I-238/SR-238	20	I-238/I-880	SR-238/I-680 (Fremont)
I-580	15	I-580/I-205	I-580/I-5
SR-16	29	SR-16 @ South Watt Ave	SR-16/SR-49
SR-32	22	SR-32/I-5 (Orland)	SR-32/SR-99
SR-49	8	SR-49/SR-16	SR-49/SR-88
SR-49	24	SR-49/I-80 (Auburn)	SR-49/SR-20
SR-65	32	SR-65/I-80 (Roseville)	SR-65/SR-70 (Olivehurst)
SR-70/SR-149	60	SR-70/SR-99	SR-149/SR-99
SR-74	14	SR-74/I-15	SR-74/SR-79 (Hemet)
SR-79	17	SR-79/I-15 ((Temecula)	SR-79/SR-74
SR-82	20	SR-82/SR-92	SR-85/Sunnyvale Ave & Sunnyvale Ave Saratoga Rd
SR-85	24	SR-85/US-101 (Mountain View)	SR-85/US-101 (San Jose)
SR-86	11	SR-86/I-10	SR-86/SR-111
SR-87		SR-87/US-101	SR-87/SR-85
SR-88	40	SR-88/SR-99	SR-132/SR-99
SR-92	20	SR-95/I-280	SR-92/I-238
SR-132	21	SR-132/SR-99	SR-132/I-580
SR-140	65	SR-140/I-5	SR-140 Terminus (El Portal)
SR-156	11	SR-156/US-101	SR-156/SR-152
SR-237	10	SR-237/SR-85	SR-237/I-680 (Milpitas)

Table 5: Round 7 Alternative Fuel Corridor Nominations – EV Corridor Ready

Corridor	Miles	Start	End
SR-57	28	I-5/SR-22	SR-57/I-210

Table 6: Rounds 1 – 6 Alternative Fuel Corridor Designations – EV Corridor Pending

Corridor	Miles	Start	End
I-10	100	Indio	CA/AZ Border
I-15	101	Yermo	CA/NV Border
I-210/SR-210	17	I-210/I-5 (Sylmar)	Glendale (Pennsylvania Ave exit 17)
I-40	144	Barstow	CA/AZ Border
I-5	67	Coalinga	Buttonwillow
I-8	154	El Cajon	CA/AZ Border
SR-1	294	Fort Bragg	Monterey

Corridor	Miles	Start	End
SR-1	315	I-5 (Camino Capistrano); Monterey	San Simeon
SR-111/ SR-78/SR-86	12	White Water	Palm Springs
SR-118	46	Saticoy (near Oxnard)	San Fernando
SR-120	162	I-5 (Lathrop)	US-395 (Lee Vining)
SR-125	22	SR-905 (Otay Mesa)	SR-52 (Santee)
SR-14	5	SR-14/I-5 (Sylmar); Lancaster	Santa Clarita; SR-14/US-395 (Inyokern)
SR-152	102	Watsonville	Chowchilla
SR-180	58	SR-99 (Fresno)	SR-245 Junction
SR-198	89	I-5 (Coalinga)	Sequoia National Park
SR-199	36	US-101 (Crescent City)	CA/OR Border
SR-20	21	US-101 (Ukiah)	SR-29 (Upper Lake)
SR-20	143	SR-53 (Clearlake Oaks)	I-80 (Emigrant Gap)
SR-23	32	SR-118 (Moorpark)	US-101 (Thousand Oaks)
SR-24	16	I-980 (Oakland)	I-680 (Walnut Creek)
SR-29	31	SR-53 (Lower Lake)	SR-20 (Upper Lake)
SR-299	100	Arcata	Douglas City
SR-4	44	SR-4/I-80 (Hercules)	Brentwood
SR-4	55	Port of Stockton Expressway	SR-49 (Angels Camp)
SR-41	150	Fish Camp	Shandon
SR-46	88	Paso Robles	McFarland
SR-55	18	Anaheim	Newport Beach
SR-58	71	SR-58/SR-14 (Mojave)	SR-58/I-5 (Barstow)
SR-67	7	I-8 (El Cajon)	Eucalyptus Hills (NHS Terminus)
SR-7	7	I-8 (Holtville)	SR-98 (Calexico)
SR-905	9	CA/Mexico Border	I-5 (San Diego)
SR-94	37	I-5 (San Diego)	SR-188 (Tecate Rd)
US-101	46	Ukiah; Trinidad	Garberville; CA/OR Border
US-101	42	Trinidad	Klamath
US-395	352	Topaz	Hesperia
US-395	203	CA/OR Border	CA/NV Border
US-97	54	CA/OR Border	I-5 (Weed)

Table 7: Rounds 1 – 6 Alternative Fuel Corridor Designations – EV Corridor Ready

Corridor	Miles	Start	End
I-10	142	Santa Monica	Indio
I-105	21	El Segundo (California Street)	I-105/I-605 (Norwalk)
I-110	24	Los Angeles (1230 W 3 rd St)	I-110/SR-47 (San Pedro)
I-15	187	San Diego (@start of I-15)	Yermo
I-205	13	Tracy (@ I-580)	Tracy (@ I-5)
I-210/SR-210	69	Glendale (Pennsylvania Ave exit 17)	I-10/SR-210 (Redlands)
I-215	45	San Bernardino	Murrieta
I-280	57	San Francisco (5 th and King St)	I-680 (San Jose)
I-405	62	I-5 (Mission Hills)	I-5 (Irvine)
I-5	470	CA/OR Border	CA/Mexico Border
I-5	260	Buttonwillow	CA/Mexico Border
I-505	39	I-505/I-5 Split (Dunnigan)	I-505/I-80 (Vacaville)
I-580	73	US-101 (San Rafael)	I-5 (Tracy)
I-605	34	I-605/I-210 (Duarte)	I-605/I-405 (Seal Beach)
I-680	73	Cordelia	I-280 (San Jose)
I-710	23	Los Angeles (@ E. Valley Rd)	Long Beach
I-8	17	San Diego	El Cajon
I-80	206	San Francisco	Cisco Grove
I-805	28	I-805/I-5 (Sorrento Valley)	I-805/I-5 (San Ysidro)
I-880	45	I-280 (San Jose)	I-80 (Oakland)
SR-111/SR-78/SR-86	40	Palm Springs	Coachella
SR-12	104	SR-12/SR-116 (Sebastopol)	SR-12/SR-99 (Lodi)
SR-14	43	Santa Clarita	Lancaster
SR-299	39	Douglas City	Redding
SR-39	21	SR-39/SR-72 (La Habra)	SR-29/SR-1 (Huntington Beach)
SR-58	85	I-5 (Buttonwillow)	SR-58/SR-14 (Mojave)
SR-60	78	I-10/I-5 (Los Angeles)	I-10 (Beaumont)
SR-78	17	SR-78/I-5 (Oceanside)	SR-78/I-15 (Escondido)
SR-91	60	SR-91/I-110 (Gardena)	SR-78/I-15 (Riverside)
SR-99	425	Red Bluff	Wheeler Ridge
US-101	521	I-10/I-15 (Los Angeles); Garberville	Ukiah; Trinidad
US-50	106	West Sacramento	South Lake Tahoe

Freight EV Corridors

This year the FHWA introduced the designation of Freight EV corridors. Title VIII of Division J of the Bipartisan Infrastructure Law requires the designation of national EV charging corridors that identify the near- and long-term need for, and the location of, EV charging infrastructure to support freight and goods movement at strategic locations along major national highways, the National Highway Freight Network,⁴¹ and goods movement locations including ports, intermodal centers, and warehousing locations.

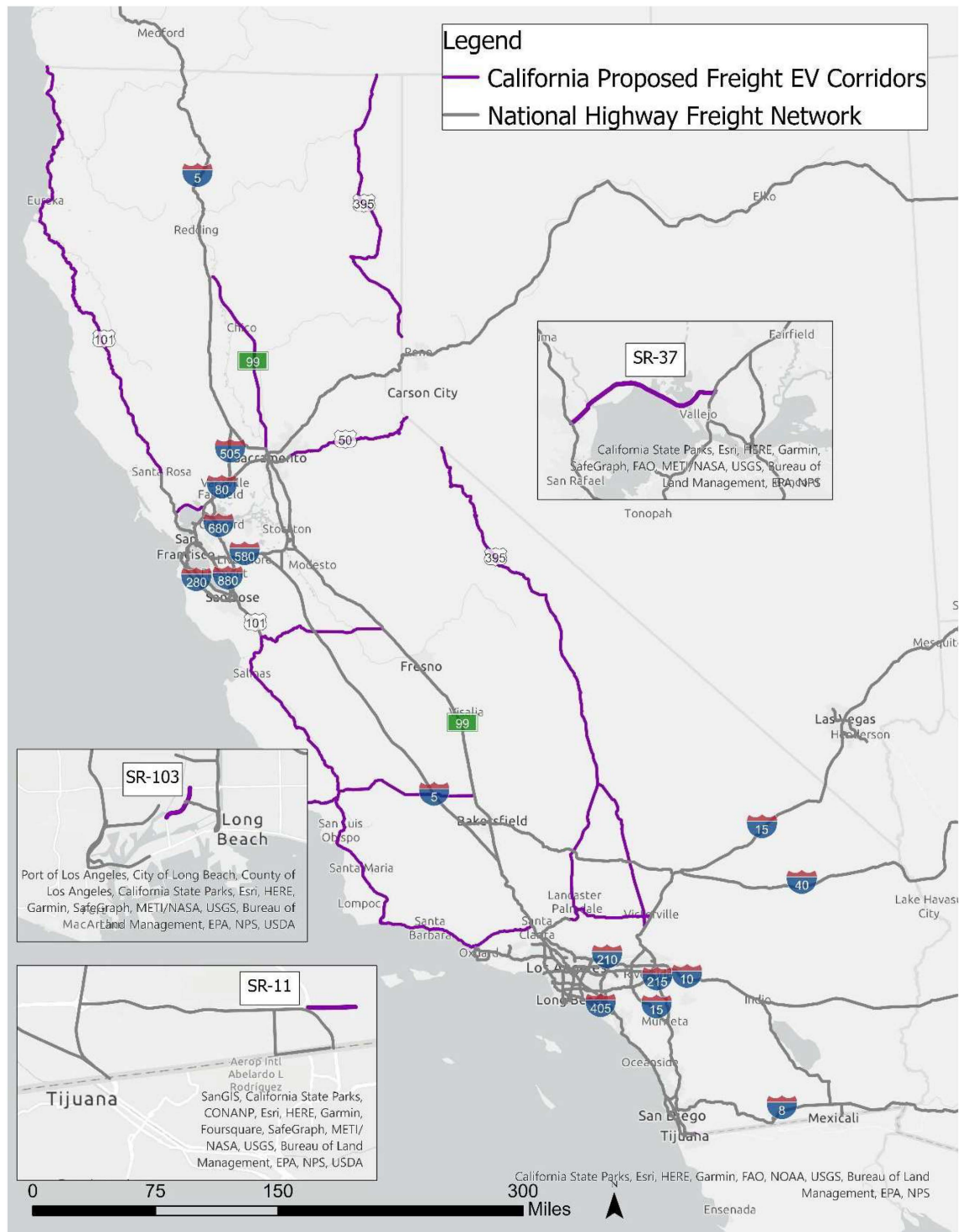
The FHWA proposed using the National Highway Freight Network as the preliminary designation for Freight EV corridors. California has nominated 14 additional corridor segments to be included as Freight EV corridors (Figure 7 and Table 8). The nominated corridors were identified by stakeholder input and the Senate Bill 671 Working Group.

Table 8: Proposed Freight EV Corridors

Corridor	Miles	Start	End
SR- 11	1.4	SR-125/SR-905	SR 11 Terminus (Enrico Fermi Dr)
SR-14	121	SR-14/I-5 (Sylmar)	SR-14/US 395 (Inyokern)
SR- 37	21	SR-37/US-101	SR-37/I-80
SR-46	89	SR-46/US-101	SR-46/SR-99
SR-99	127	I-5/SR-99 (Red Bluff)	SR-99/I-5 (Sacramento)
SR-103	3	SR-103/SR-47	SR-103/SR-1
SR-126	41	SR-126/US-101 (Ventura)	SR-126/I-5 (Santa Clarita)
SR-138	48	SR-14/SR-138 (Palmdale)	SR-138/I-15 (Victorville)
SR-152	83	SR-152/US-101	SR-152/SR-99
US-50	106	US-50/I-80	CA/NV Border
US-101	322	CA/OR Border	US 101 Santa Rosa @ Colgan Ave
US-101	351	US 101 (Gilroy @ Leavesley Rd)	US 101 Terminus Los Angeles
US-395	193	CA/OR Border	CA/NV Border
US-395	354	CA/NV Border	US-395/I-15 (Hesperia)

⁴¹ Federal Highway Administration. [National Highway Freight Network](#).

Figure 7: Proposed Freight EV Corridors



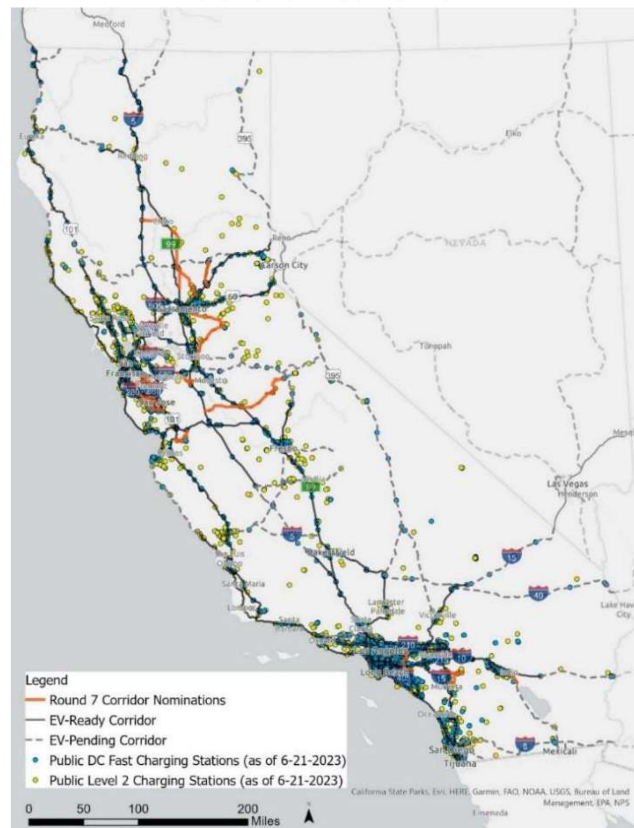
Existing Charging Stations

Existing Locations of Charging Infrastructure Along AFCs

A complete table of existing locations of public charging infrastructure along AFCs can be downloaded from the US Department of Energy's (US DOE) Alternative Fuels Data Center (AFDC). Figures 8-10 summarize this data by displaying locations of existing public DC fast and Level 2 charging stations along electric corridors.

As of June 2023, California has 1,902 public DCFC stations with 9,207 DC fast chargers or ports, and 14,133 public Level 2 stations with 32,046 Level 2 chargers.⁴² This represents an increase of 321 DCFC stations with 2,446 DC fast chargers and 1,565 Level 2 stations with 3,169 Level 2 chargers since August 2022, when the previous version of the NEVI Plan was published.

Figure 8: Alternative Fuel Corridors and Existing Public DC Fast Charging and Level 2 Charging Stations in California



⁴² US Department of Energy. [Alternative Fueling Station Locator](#).

A station location is a site with one or more EVSE ports (i.e., chargers) at the same address. An EVSE port (or charger) provides power to charge only one vehicle at a time even though it may have multiple connectors.

Figure 9: Alternative Fuel Corridors and Existing Public DC Fast Charging and Level 2 Charging Stations in California (Selected Zoom of Northern California)

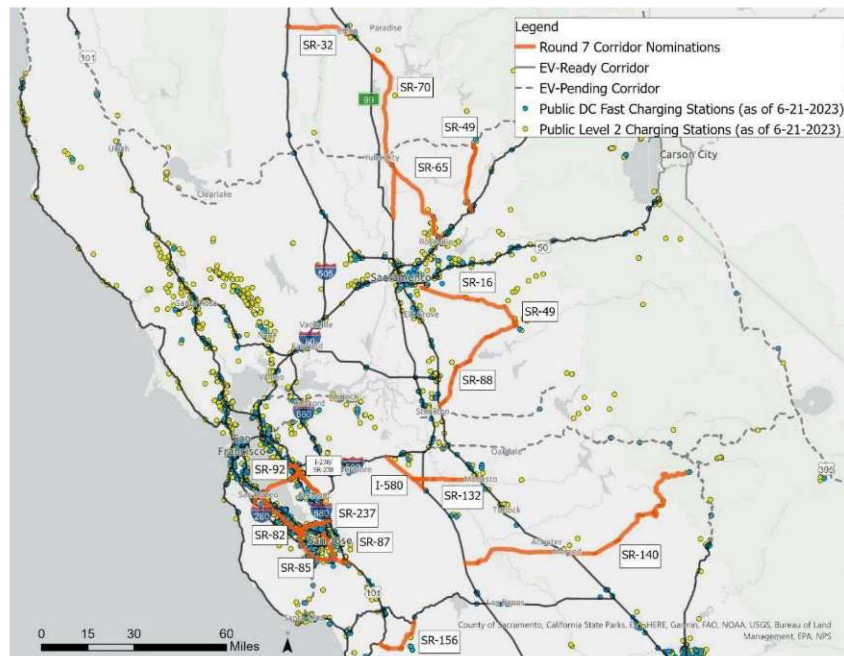
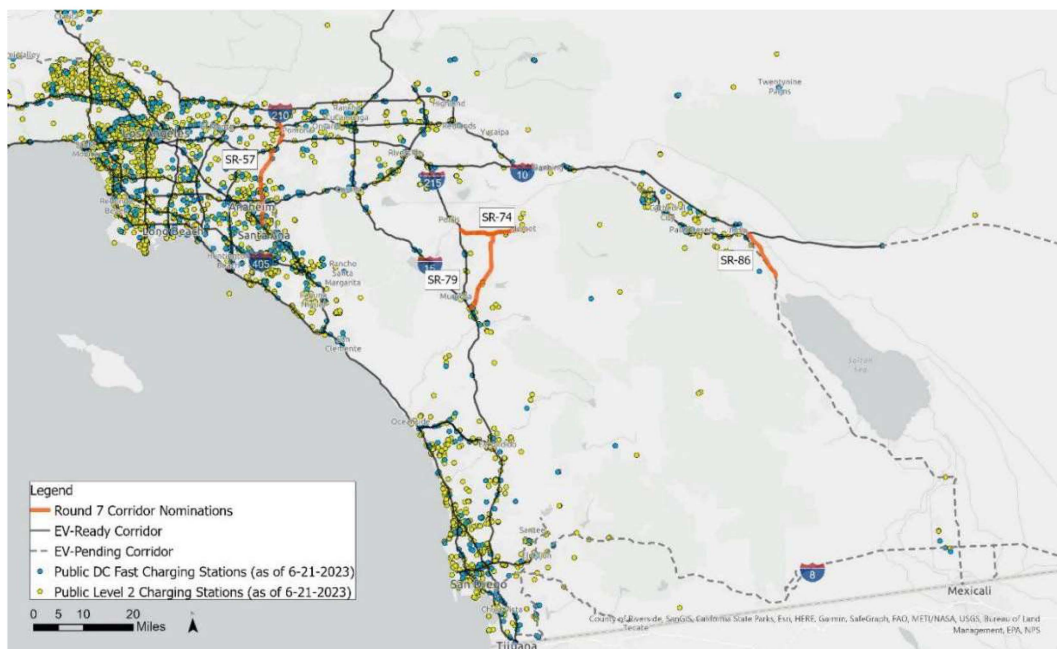


Figure 10: Alternative Fuel Corridors and Existing Public DC Fast Charging and Level 2 Charging Stations in California (Selected Zoom of Southern California)



EV Charging Infrastructure Deployment

See the Plan Vision and Goals Section for a description of California's overarching strategy for EV charging infrastructure installations.

Planned Charging Stations

As shown in Table 9, California is making good progress in funding and deploying light-duty charging stations; over 18,000 DC fast chargers have been installed or financed to date. However, over 19,000 new DC fast chargers are needed to support the 2030 target of 8 million ZEVs. The \$384 million in funding from the NEVI Formula Program will be critical to financing the stations and chargers needed to achieve the 2030 goal.

Presently, the match requirement in most of the CEC's funding programs for DCFCs is 50 percent. At a macro level, more than half of the state's chargers for light-duty vehicles were funded solely with private capital. For public sector spending, the CEC, Caltrans, and DGS combined to fund 10 percent of the operational chargers. Utilities account for nearly 30 percent of light-duty charging infrastructure funding, with settlement funds from VW and NRG accounting for another 5 percent.⁴³

Table 9: Status of Chargers Needed to Support 2030 Light-Duty ZEV Targets

Category	Level 2	DCFC
Existing Publicly Available and Shared Private Chargers	78,500	9,207
Chargers for which Funding is Allocated	163,000	9,000
Totals	241,500	18,207
AB 2127 Report's Estimate of 2030 Charging Needs	1,126,855	37,461
Number of Chargers Needed to Achieve 2030 Targets	885,355	19,254

Source: CEC Staff Analysis as of March 2023

⁴³ California Energy Commission. (2022, December 1). [Zero-Emission Infrastructure Plan](#).

Infrastructure Deployments/Upgrades

Figures 11-13 show the locations of existing public DC fast charging stations and NEVI-compliant stations (based on the 2022 NEVI Formula Program Guidance) as of June 2023.⁴⁴ The NEVI-compliant stations displayed are DC fast charging stations that have at least four EVSE ports with CCS connectors that each support a power output of at least 150 kW and are within one mile of an AFC. The US DOE's AFDC provides station data by state and fuel type. As of June 2023, California has a total of 158 stations (795 DCFCs) that meet the original NEVI Formula Program criteria.

Charging stations should be no more than 50 miles apart and within one mile from the corridor exit or intersection to meet the NEVI Formula Program standards. California's NEVI Formula Program solicitation manual will include the number, and, in some cases, the approximate location of stations required on AFCs to fulfill these requirements. Future updates of the NEVI Corridor Group Interactive Map will show portions of corridors that have not been built out to signal to applicants where gaps occur.⁴⁵

⁴⁴ California's NEVI agencies do not have access to the data that would confirm compliance with the new federal requirements for a NEVI station.

⁴⁵ California Energy Commission. [California's National Electric Vehicle Infrastructure \(NEVI\) Funding Program Map](#).

Figure 11: Existing DC Fast Charging Stations Along Alternative Fuel Corridors in Northern and Southern California

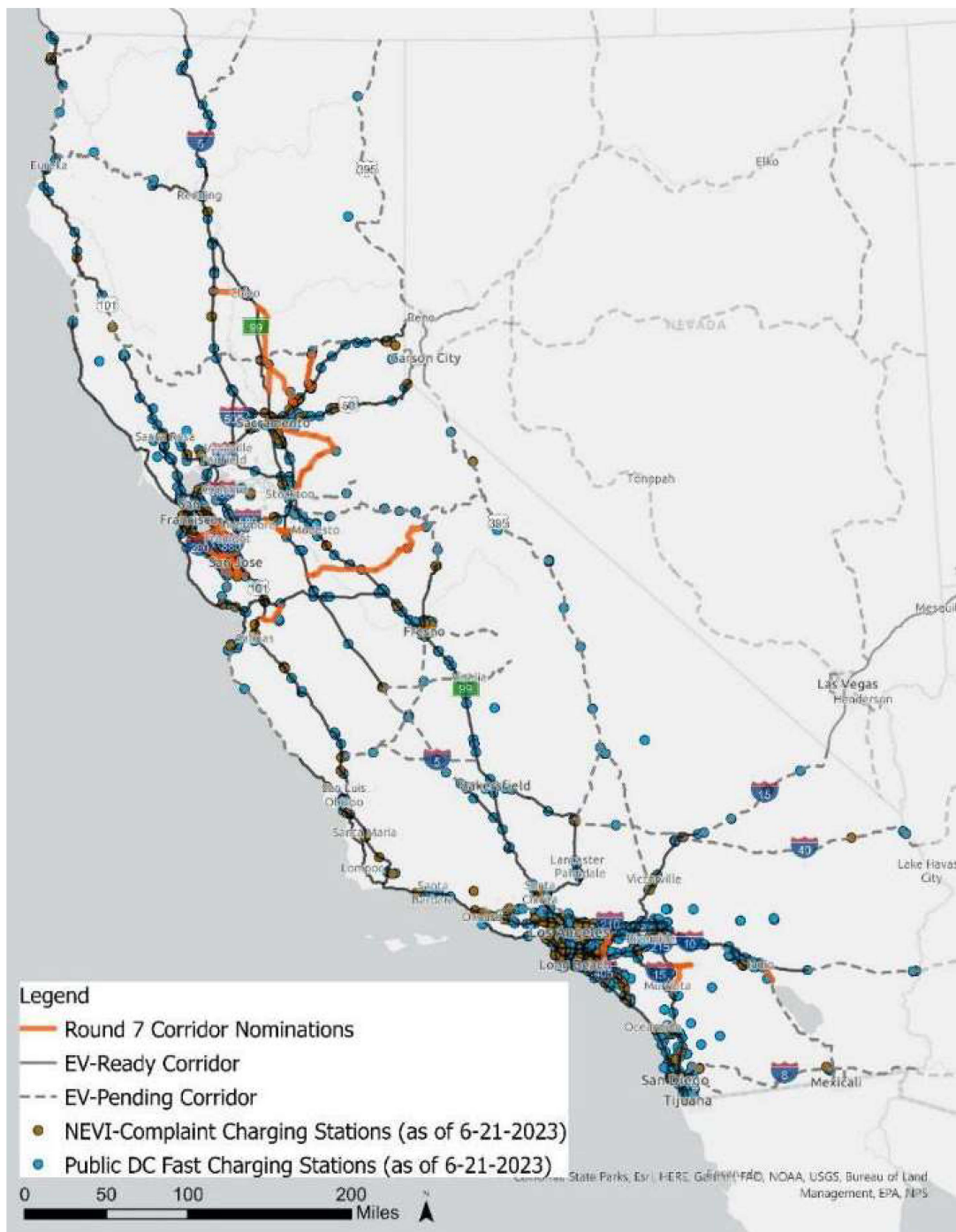


Figure 12: Existing DC Fast Charging Stations Along Alternative Fuel Corridors (Selected Zoom of Northern California)

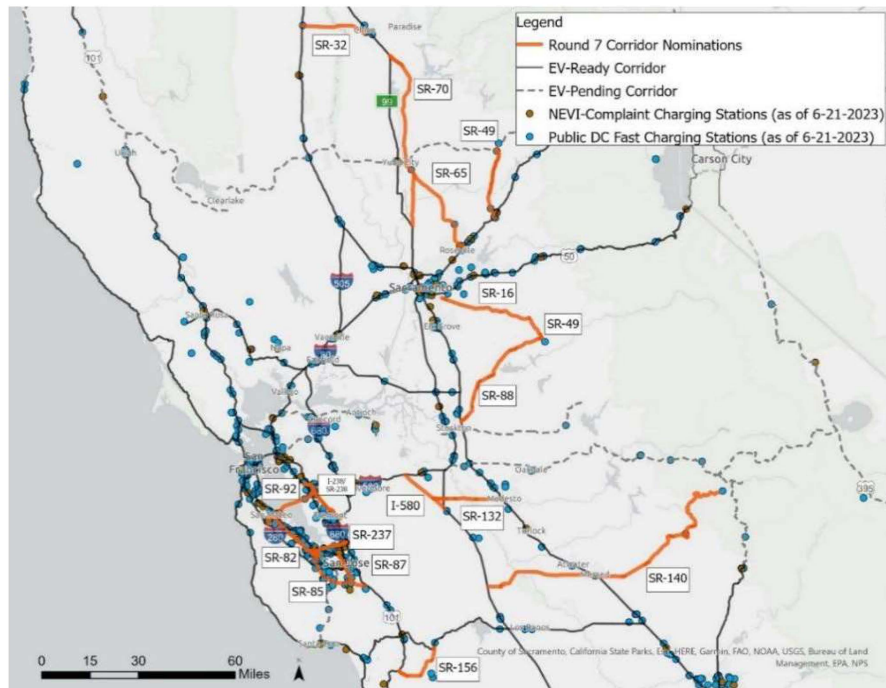
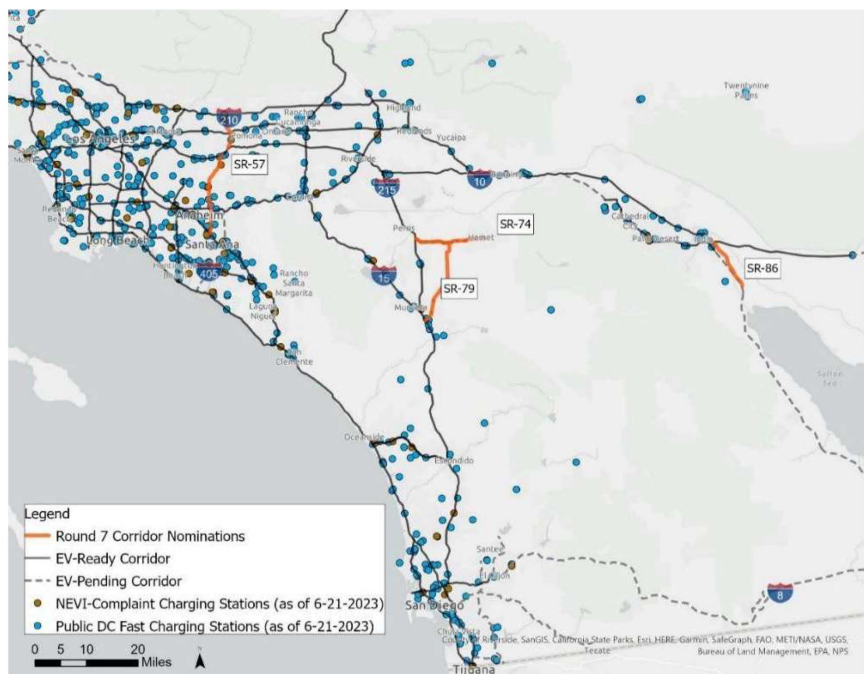


Figure 13: Existing DC Fast Charging Stations Along Alternative Fuel Corridors (Selected Zoom of Southern California)



Planning Towards a Fully Built Out Determination

The first six corridor groups to be put out for solicitation will require 28 charging stations and 291 charging ports to meet NEVI Formula Program requirements. Additional needs analysis will be performed prior to designing and releasing subsequent solicitations. The number of charging stations and ports may increase or decrease. Increases would occur with the designation of additional AFCs and if some existing Electrify America sites are deemed non-compliant with NEVI Formula Program requirements. Decreases would occur if additional NEVI-compliant charging stations are deployed or additional 150 kW+ charging ports are deployed at existing stations.

Implementation

The CEC has taken rigorous steps to support the reliable operation and maintenance of charging infrastructure funds provided through the CTP, including those funded through the NEVI Formula Program. Current and future CEC solicitations for charging infrastructure will include (1) minimum reliability standards, (2) detailed recordkeeping and reporting requirements, (3) requirements for annual preventive maintenance, and (4) maximum times to conduct corrective maintenance. The CEC is taking additional steps to better understand and ensure the reliability of charging infrastructure operating in California. The CEC has recently approved a contract for a third-party to field test publicly accessible chargers by sending testers to charging stations and attempting to charge a variety of EV makes and models.

Assembly Bill 2061 was signed by Governor Newsom in September of 2022 and requires the CEC to develop uptime recordkeeping and reporting requirements for all chargers installed with a state incentive on or after Jan 1, 2024. Pursuant to Assembly Bill 2061, the CEC is currently drafting regulatory language, which is scheduled to publish in Q3 2023. This regulation will align with, and add to, the requirements of 23 CFR Part 680.

Please see the Plan Vision and Goals Section for a full description of the measures the California NEVI agencies will use to ensure that the NEVI-funded stations are operated and maintained in conformance with federal requirements, including accountability by station owners and operators. As noted, planning, installation, maintenance, and ownership of the NEVI-funded stations is the responsibility of the grant recipient. These obligations are part of the legally binding agreements each awardee must agree to in accepting a NEVI-funding award.

Please see the Labor and Workforce Considerations Section for a full description of the measures California will use to ensure conformance with NEVI's labor, training, and installation standards.

Strategies to Address Resilience, Emergency Evacuation, Snow Removal/Seasonal Needs

Due to varied climate and geography, California experiences a variety of natural disasters and extreme weather events, including earthquakes, wildfires, flooding, mud slides, and snowstorms. During these events it is important to have charging infrastructure that is reliable in the event of evacuations. A challenge in maintaining reliability is that the weather events often lead to power and communication outages. Additionally, in recent years, utilities have begun shutting down power during high winds to prevent fires. California will look to technology advancements and innovation to provide power during extreme weather events and emergency evacuations. Battery backup and storage, often coupled with solar power, are some of the technologies currently under consideration.

With direction from the CPUC, investor-owned utilities are investigating ways to help EV owners and fleets managers charge their vehicles during planned or unplanned power outages, including: (1) Improving communication, before and during potential or active de-energization events, about the location and accessibility of charging stations near impacted areas; (2) Investigating the feasibility of grid-independent EV charging stations (e.g., mobile charging stations) which can be used to charge EVs during power shutoffs and other emergency events; and (3) Coordinating with EV charging network providers to reinforce EV charging networks with backup generation.

Equity Considerations

Caltrans and the CEC will continue to prioritize NEVI Formula Program funding for corridor charging that delivers direct and intentional benefits to disadvantaged and low-income communities (LICs), including California tribes and rural communities. At least 40 percent of NEVI Formula Program funds will be for projects that provide benefits to Justice40-designated communities. Additionally, at least 50 percent of NEVI Formula Program funds will be for projects that provide benefits to California-designated DACs or LICs.

Staff will rank corridor segments to ensure deployment aligns with charging deployment goals, including equity goals, and provide funding for projects in rank order until funding is exhausted. Segments within Justice40-designated communities or California-designated DACs or LICs will receive higher scores during application evaluations to meet the equity goals under the Justice40 Initiative and the CEC's CTP. Staff will also evaluate NEVI project applications and prioritize those that provide additional community benefits beyond project location, and will require that all funded projects satisfy, at minimum, the requirements of the NEVI Formula Program and the White House Interim Guidance on Justice40.

Identification and Outreach to Disadvantaged Communities (DACs)

See the discussion in the Outreach Section for more information about California's outreach to DACs and tribes.

Caltrans and the CEC will continue to use the Justice40 community designations, and California-designated DAC and LIC designations. These are defined as follows:

- Justice40 communities are designated by the Council on Environmental Quality as communities that experience health, transportation access, and energy burdens, with economies highly dependent on fossil energy sources, and exposure to environmental and climate hazards. These include federally recognized tribal nations and US Territories.
- California DACs are designated by the California Environmental Protection Agency as communities that experience the highest pollution burden and are especially vulnerable to pollution's effects.
- California LICs are designated by CARB as census tracts with median household incomes at or below 80 percent of the statewide median income or with median household incomes at or below the threshold designated as low income by the Department of Housing and Community Development.

Figures 14-16 show the locations AFCs, Justice40 communities only, California DACs or LICs only, and overlap of Justice40 communities and California DACs or LICs.

Figure 14: Locations of Alternative Fuel Corridors and Disadvantaged or Low-income Communities

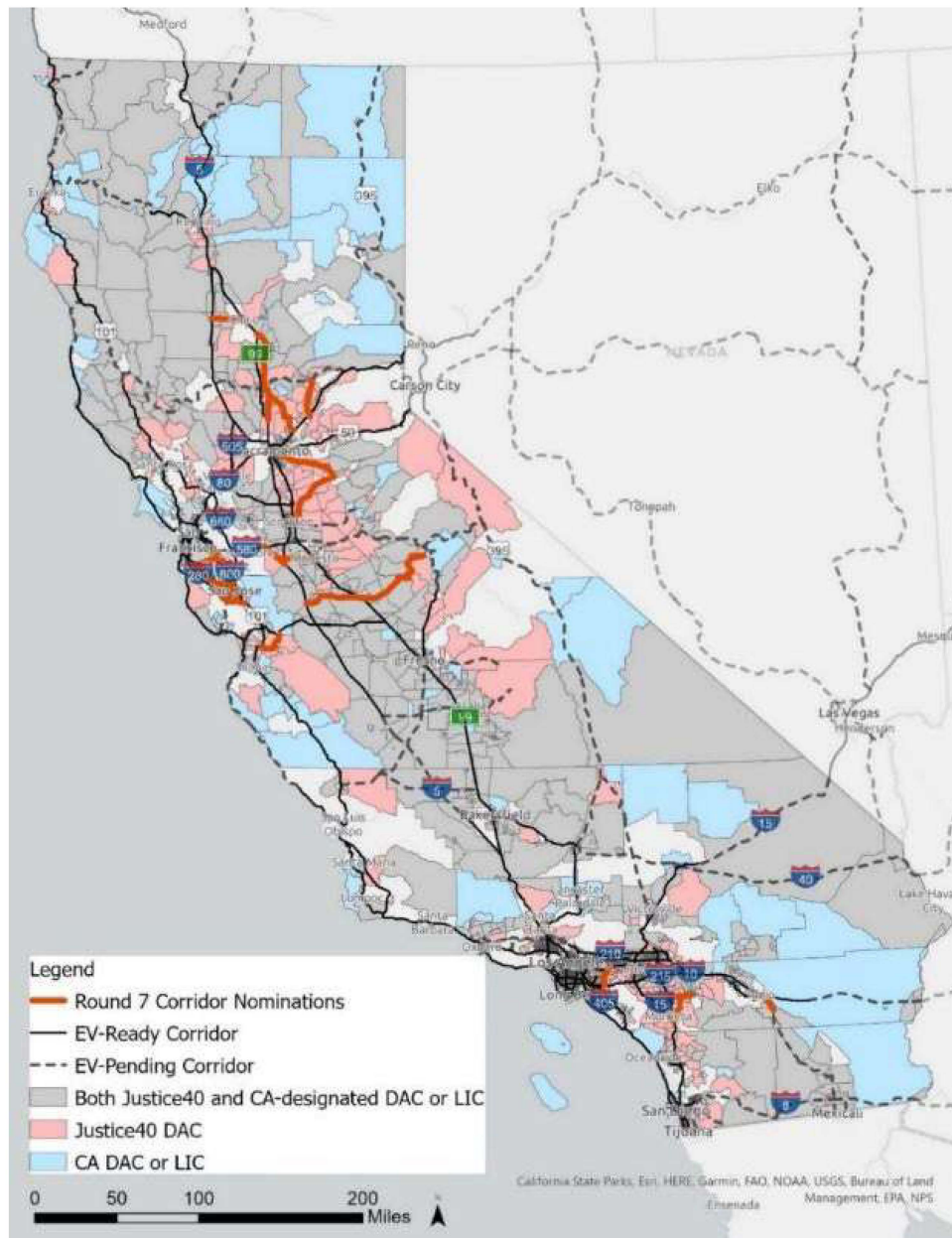


Figure 15: Locations of Alternative Fuel Corridors and Disadvantaged or Low-income Communities (Selected Zoom of Northern California)

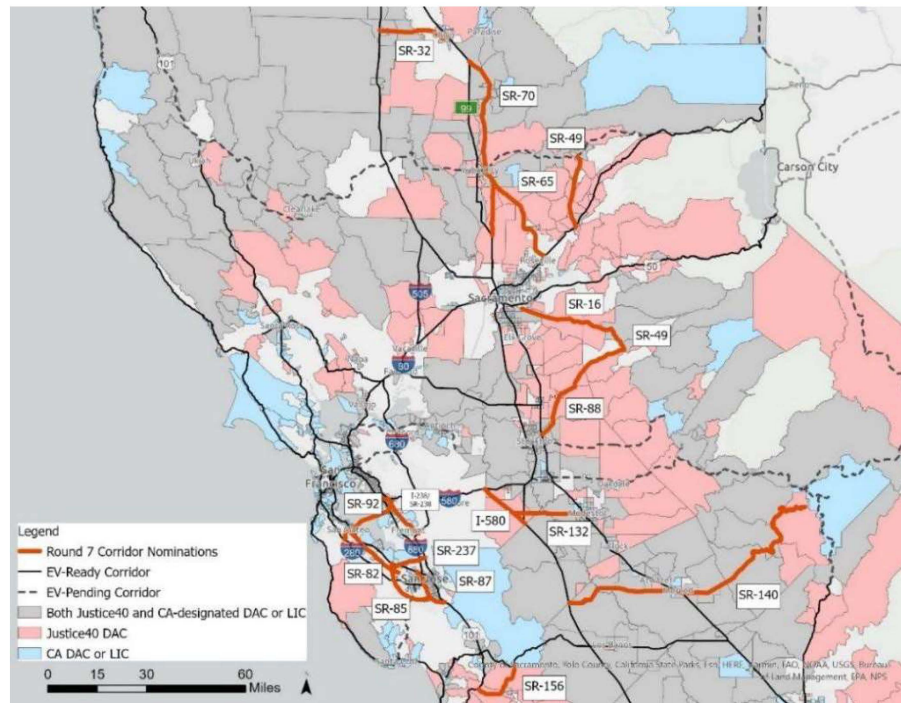
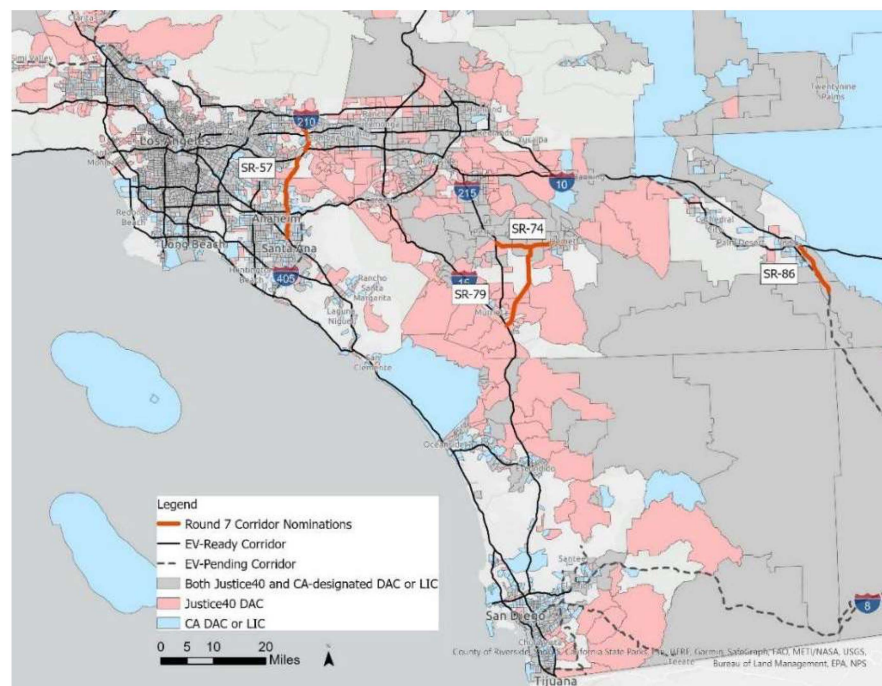


Figure 16: Locations of Alternative Fuel Corridors and Disadvantaged or Low-income Communities (Selected Zoom of Southern California)



Process to Identify, Quantify, and Measure Benefits to DACs

Applications to the competitive solicitations will be evaluated on how well they deliver benefits and avoid disbenefits to communities, particularly to DACs, including California tribes, and LICs. California will direct project applicants to the latest NEVI Corridor Group Interactive Map, which displays eligible corridors, Justice40 communities, DACs, and LICs. Project applicants will be required to report qualitative and quantitative measurements of benefits, including whether the project addresses community-identified needs, improves access and economic well-being, and removes transportation-related disparities to residents in and affected by the project area. To ensure that projects do not result in disbenefits or harms to communities, such as displacement and eventual gentrification, applicants will be asked to identify potential disbenefits from the project and action taken to avoid these. Table 10 lists goals, metrics, and baselines for tracking NEVI project benefits.

Caltrans and the CEC will continue to engage with community leaders and advisory groups (Disadvantaged Community Advisory Group, the Native American Advisory Committee, Interagency Transportation Equity Advisory Committee, etc.) throughout each round of solicitation design. Caltrans and the CEC will listen to community partners and consider their input when designing solicitation requirements, scoring criteria, and identifying metrics and data collection requirements for quantifying community benefits. Program outcomes will be monitored through data collection requirements in agreements with solicitation awardees. This data collection will support compliance with NEVI requirements while documenting community transformation from these investments through community feedback.

CEC staff are working with communities, tribal and government entities, and advocacy groups to develop the CTP's Community Benefits Framework, which is intended to assess, track, and improve community benefits beyond project location. This draft framework will assist in identifying the needs of rural communities and tribes and allow for improved benefits, tailored to these communities and tribes.⁴⁶ Staff at the CEC held a workshop introducing the framework in November 2022 and organized community listening sessions to gather input. The framework is expected to be released at the end of 2023.

⁴⁶ California Energy Commission. (2022, November 29). [Clean Transportation Program Community Benefits](#).

The CEC has also contracted with the National Renewable Energy Laboratory to develop methods for calculating CTP direct and indirect benefits. Metrics will include those related to air quality improvement, greenhouse gas emission reductions, and petroleum displacement. Per Senate Bill 1000 (Lara, Chapter 368, Statutes of 2018) and since 2019, the CEC has assessed the distribution of and access to public EV charging station infrastructure to determine whether infrastructure is disproportionately deployed and to inform CTP funding. The Senate Bill 1000 analysis is ongoing and will help identify areas of prioritization throughout the state to meet federal and state equity goals.⁴⁷ All of these efforts will inform how California identifies, tracks, and measures benefits to communities from NEVI Formula Program investments.

Table 10: Measuring Benefits of NEVI Formula Program Investments

Benefits Category (i.e., goals)	Metrics	Baseline
1. Improve clean transportation access through the location of chargers.	<ul style="list-style-type: none"> Number of existing NEVI-compliant chargers within Justice40 communities, DACs, or LICs and percent within California tribes and rural areas. Number of chargers installed outside of Justice40 communities, DACs, or LICs that serve residents of those communities. Include documentation of community support for the site(s) that reflect community-identify needs. 	<ul style="list-style-type: none"> Number of existing NEVI-compliant chargers within Justice40 communities, DACs, or LICs and percent within California tribes and rural areas. Number of existing NEVI-compliant chargers at sites accruing benefits to Justice40 communities, DACs, or LICs that are not located within these communities.
2. Decrease the transportation energy cost burden by enabling reliable access to affordable charging (at 97% charging port uptime per port installed for at least six years after operation begins).	<ul style="list-style-type: none"> Average dollars saved in fuel costs. Gallons of gasoline and/or diesel fuel displaced (with associated mileage information). Monthly uptime percentage of each charging port (formula for calculation will be provided by the CEC). Payment methods used to initiate charging sessions. Methods used to reduce or minimize charging costs to drivers, particularly drivers 	<ul style="list-style-type: none"> Average dollars spent on fuel costs. Average gallons of gasoline used. Availability of operating gas stations within three miles of project site. Payment methods available at operating gas stations nearby. Limited consideration of ways to minimize charging costs for drivers from Justice40

⁴⁷ Senate Bill 1000 requires the CEC to assess whether charging infrastructure is disproportionately deployed by population density, geographical area, or population income level.

Benefits Category (i.e., goals)	Metrics	Baseline
	from Justice40 communities, DACs, or LICs.	communities, DACs, or LICs.
3. Reduce environmental exposures to transportation emissions.	<ul style="list-style-type: none"> Grams of CO₂ equivalent reduced per dollar of NEVI investment. Criteria air pollutants reduced, including non-methane hydrocarbons, oxides of nitrogen, particulate matter, formaldehyde, using Argonne National Laboratory's Alternative Fuel Life-Cycle Environmental and Economic Transportation Charging and Fueling Infrastructure. Reduction in asthma and cardiovascular disease visits (CalEnviroScreen). 	<ul style="list-style-type: none"> Grams of CO₂ emitted without infrastructure. Criteria air pollutants emitted without infrastructure. Asthma and cardiovascular disease visits without infrastructure.
4. Increase parity in clean energy technology access and adoption (at least 50% benefitting California-designated DACs or LICs, at least 40% benefitting Justice40 communities).	<ul style="list-style-type: none"> Number of chargers installed and proportion within or near Justice40 communities, DACs, or LICs. 	<ul style="list-style-type: none"> No limits on siting, including within or near Justice40 communities, DACs, and LICs.
5. Increase access to low-cost capital to increase equitable adoption of more costly, clean energy technologies like EVs and EV chargers.	<ul style="list-style-type: none"> Dollars spent on capital and percent of revenue going to businesses in Justice40 communities, DACs, or LICs. 	<ul style="list-style-type: none"> Cost to install infrastructure without NEVI Formula Program support.
6. Increase the clean energy job pipeline, job training, and enterprise creation in disadvantaged communities.	<ul style="list-style-type: none"> Dollars spent on job training and percent spent for training Justice40, DAC, or LIC residents. Number of job training, apprenticeship, and education program participants and percent from Justice40 communities, DACs, or LICs. Number of jobs created by project and percent of hires from Justice40 communities, 	<ul style="list-style-type: none"> Dollars spent on training Justice40, DAC, or LIC residents for clean energy jobs in the last five years. Number of clean energy job and education programs targeting Justice40, DAC, or LIC residents in the last five years. Number of filled clean energy job positions in

Benefits Category (i.e., goals)	Metrics	Baseline
	DACs, or LICs. Include proportion that are full-time versus part-time.	the area and proportion that are full-time versus part-time and Justice40, DAC, or LIC hires.
7. Provide charging infrastructure for transit and shared-ride vehicles.	<ul style="list-style-type: none"> Engagement with ride-hailing/ride-sharing services measured by comments received from entities during the public engagement process. Number of transit buses, transit routes, and/or riders served by charging infrastructure. 	<ul style="list-style-type: none"> No effort to engage with ride-hailing/ride-sharing services. Non-ZEV transit routes.
8. Increase equitable access to the electric grid.	<ul style="list-style-type: none"> Dollars spent to electrify sites and number of sites requiring increased electrical service. Percent of dollars spent and number of sites within Justice40 communities, DACs, or LICs. Include documentation of utility findings for sites located within or benefiting Justice40 communities, DACs, or LICs. Number of additional charging sites with back-up solar and battery energy storage. Percent within Justice40 communities, DACs, LICs, rural areas, and California tribes. Includes specs (e.g., size in megawatt hours) for equipment. 	<ul style="list-style-type: none"> Number of sites within Justice40 communities, DACs, or LICs, including within California tribes and rural areas, that do not require increased electrical service and proportion of those sites that are EV-capable, ready, or installed. Number of charging sites within Justice40 communities, DACs, or LICs with solar and battery energy storage.
9. Minimize gentrification-induced displacement from new EV charging infrastructure.	<ul style="list-style-type: none"> Documentation from project applicants describing how they will mitigate potential gentrification-induced displacement resulting from the project. Letters of support from community leaders from Justice40 communities, DACs, or LICs impacted by the project. Community transportation needs assessments developed with community 	<ul style="list-style-type: none"> Limited focus on displacement and gentrification effects in project applications. No or few letters of support from community leaders or members. Community transportation needs assessment not identified within project applications.

Benefits Category (i.e., goals)	Metrics	Baseline
	input that identify fast charging as a transportation need within the community.	
10. Increasing wealth for Justice40 and California-designated DACs or LIC.	<ul style="list-style-type: none"> • Portion of NEVI investments in or benefitting Justice40 communities, DACs or LICs, California tribes, or rural areas. • Number of contracts and dollar value awarded to small businesses and businesses that are principally owned by women, BIPOC, disabled veterans, and/or LGBTQIA+ persons. 	<ul style="list-style-type: none"> • Portfolio of charging infrastructure investments for targeted Justice40 communities, DACs, LICs, California tribes, and rural communities within the last five years. • No emphasis on contracts with small business that are principally owned by women, BIPOC, disabled veterans, and/or LGBTQIA+ persons.

Labor and Workforce Considerations

The CEC and Caltrans continue to advance labor and workforce discussions to deliver on NEVI objectives of supporting EV charger installation and maintenance with a trained, experienced, and diverse workforce. During the past year, the state continues to engage with industry, labor, and training partners to not only ensure that the workforce installing, maintaining, and operating chargers has appropriate licenses, certifications, and trainings in compliance with 23 CFR 680.106(j), but that this workforce grows over time to meet NEVI and other EV charger deployment goals in the state.

The CEC is developing a potential partnership with the California Employment Training Panel (ETP) to increase the number of EVITP-trained and certified electricians in the state. The ETP is a state agency that provides training through a pay-for-performance methodology that advances high road economic principles while providing skills training for industry and job specific work such as EV charger installation and maintenance. The ETP will use CEC funding to offer training for journey-level electricians and C-10 licensed electricians to become EVITP trained and certified. Outreach and engagement for this training will be conducted in rural communities, Justice40 communities, DACs, and LICs.

California's first NEVI Plan described how potential state budget resources through the California Workforce Development Board (CWDB) could be leveraged upon budget approval by the state Legislature and the Governor. These budget resources have been approved and will provide funding and support for high road training partnerships (H RTP) that could be used for EV charger construction, installation, and maintenance. The CEC is working with the CWDB to ensure that training partnerships related to EV charging are eligible for H RTP funding and grants.

To further ensure diversity, licensure, and certification of electricians, the CEC is working with the California State Licensing Board, which approves C-10 licensees, the classification eligible for the installation of EV chargers and EVITP training. The State Licensing Board provides industry bulletins to C-10 licensed electricians regarding new developments, training, and business opportunities. The CEC, working with the State Licensing Board, will post periodic industry bulletins regarding the availability of EVITP training and certification for NEVI-related work.

The CEC has conducted public workshops, meetings, and discussions with EVITP, qualified technicians, and EV charger companies to better understand advancements in charger technologies, workforce impacts, and EVITP training since submission of the 2022 NEVI Plan. California's electricians are trained on EVITP 4.0 curriculum, which is currently going through a revision and update to EVITP 5.0 that will keep pace with industry and market changes and the need to upskill electricians in the classroom and in the field. EVITP indicates that the new curriculum and training will be released in late 2023 and the CEC will encourage C-10 licensed electricians to be trained in the latest version curriculum.

California's NEVI agencies will include compliance, verification, and validation of all licensed trades, crafts, and contractors performing work under NEVI. These labor and workforce requirements will require specific documentation (e.g., contractor's license number, EVITP certification number, etc.) in solicitation responses. The agreements for NEVI projects will also specify ongoing documentation as well as data collection that validate compliance with all licensing requirements; ensure all businesses, electricians, or tradespeople are in good standing; and identify any incidences related to labor violations.

In September 2022, Governor Newsom signed Senate Bill 674 (Durazo, Chapter 875, Statutes of 2022) that established the High Road Jobs in Transportation-Related Public Contracts and Grants Pilot Program into law. The law requires the Department of General Services or Caltrans to incorporate high road job standards into covered public contracts, as defined, for the acquisition of zero-emission transit vehicles or EVSE valued at \$10 million or more. The law also specifies the Department of General Services, with Caltrans and the Labor and Workforce Development Agency, develop policies, procedures, and requirements that effectuate high road provisions in the State Contracting Manual. Further, affected contractors are to submit annual reports that demonstrate compliance implementing these requirements. The law also specifies that the public agency that awarded the contract shall impose penalties for non-compliance in reporting. Once these labor policies and requirements are completed, the CEC and Caltrans will evaluate how the provisions of this law will be incorporated into contracting and procurement processes under the NEVI Formula Program.

Also in September 2022, Governor Newsom signed Assembly Bill 2974 (Committee on Jobs, Economic Development, and the Economy, Chapter 600, Statutes of 2022), which establishes a goal that state agencies achieve 25 percent small business participation in contracts for the construction, repair, or improvement of the state's infrastructure that is funded with proceeds from the Infrastructure Investment and Jobs Act.

Physical Security & Cybersecurity

In September 2018, former Governor Jerry Brown signed Senate Bill 327 (Jackson, Chapter 886, Statutes of 2018) which put into law the nation's first information privacy law, specifically pertaining to connected devices. Connected devices often contain vulnerabilities and are a target for cyberattacks. The law requires a "manufacturer of a connected device to equip the device with a reasonable security feature or features that are appropriate to the nature and function of the device." Additionally, any information the device may collect, contain, or transmit must be protected from unauthorized access, destruction, use, modification, or disclosure.

EV chargers provide direct connections to the vehicle's onboard system and the EV charging service provider's network, and indirectly to the driver's smart phone if the charge is paid for with an app, banking information if a debit or credit card is utilized, telecommunications provider, and the electric grid.

In April 2022, the National Renewable Energy Laboratory and members of the EV industry performed testing of SAE International's Public Key Infrastructure Design Platform. Public key infrastructure is a method for encrypting information exchange and certifying the authenticity of devices to help ensure digital trust between vehicles and charging stations.⁴⁸ Although additional testing is needed, the demonstration indicated that the public key infrastructure platform could improve security of communications between vehicles and EV charging equipment. EV charging equipment will be required to conform with the NEVI minimum standards for physical security and cybersecurity until additional measures are commercially available.

Program Evaluation

California has multiple tools for evaluating program effectiveness, monitoring charger deployment, and assessing charger needs. To evaluate program effectiveness, California currently monitors and reports progress of EV charging infrastructure through the Zero-Emission Vehicle Infrastructure Plan (ZIP). The CEC published its initial ZIP in 2022 and plans to update it biennially.⁴⁹ The ZIP includes updates on ZEV infrastructure and funding. The CEC also publishes an annual investment plan for the CTP, which includes program evaluation to guide future investments.

To assess charger needs, the CEC publishes biennial assessments, which include discussions of current charging infrastructure.⁵⁰ The CTP requires an annual investment plan, which includes updates on progress towards the state's goals. To monitor charger deployment, the CEC publishes a count of EV chargers and EV deployment in California and updates it quarterly.⁵¹

All of these mechanisms include public workshops, drafts, or opportunities to comment, and all will assist the state in monitoring and reporting progress on the EV AFC network. The required annual updates to the Deployment Plan will be used as further opportunities to evaluate and report progress. In preparing each year's NEVI Plan, California will include updates on the status of charging infrastructure in general, and projects supported with NEVI funding in particular. Finally, CEC agreement managers will track progress on NEVI projects through monthly calls, quarterly reports, invoice reviews, and critical project reviews with awardees.

Both successful and unsuccessful applications will be reviewed, and lessons learned will be incorporated into future solicitations and agreements in an effort to continually look for opportunities to improve California's NEVI Plan.

⁴⁸ O'Neill, C. (2022, April 29). [Electric Vehicle Manufacturers Mobilize Behind Charging Cybersecurity at NREL](#). National Renewable Energy Laboratory.

⁴⁹ California Energy Commission. (2022, April 14). [Draft Zero-Emission Vehicle Infrastructure Plan](#).

⁵⁰ California Energy Commission. [Electric Vehicle Charging Infrastructure Assessment – Assembly Bill 2127](#).

⁵¹ California Energy Commission. [Electric Vehicle Chargers in California](#).

Discretionary Exceptions

In December 2022, California requested an exception to the NEVI Formula Program's requirement that charging stations be no more than 50 miles apart. California's request was for the section of Interstate 40 between Ludlow and Fenner (Figure 17). This request is pending approval from the FHWA.

Figure 17: Ludlow to Fenner Along Interstate 40



Source: Google Maps

Interstate 40 is designated "Corridor-Pending" for EV charging for the entire corridor in California. This 144-mile corridor has existing sites that potentially meet NEVI criteria in Barstow, Fenner, and Needles (Figure 18).

Figure 18: Corridor With Potential NEVI-compliant and Upgradable EV Charging Stations



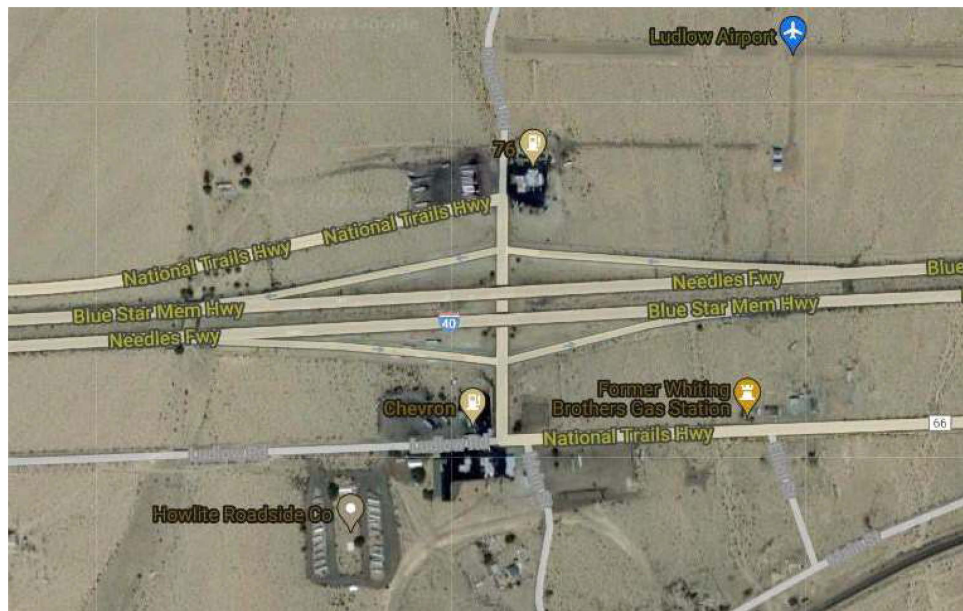
Source: AFDC Alternative Fueling Station Locator

Two sites are needed between Barstow and Fenner to satisfy the NEVI requirement that stations are no farther than 50 miles apart. However, there is a 59-mile segment between Ludlow and Fenner with no existing amenities within one mile of the corridor. The entire corridor is mostly rural with few surrounding towns and cities and primarily serves as a connecting route to and from Arizona (Figure 19). The entire corridor is located within both California-designated DACs and LICs and Justice40-designated communities.

Figure 19: Ludlow to Fenner

Source: Google Maps

Ludlow has two existing gas stations that may potentially host NEVI stations (Figure 20); a more detailed site analysis is needed to determine if these sites have sufficient power to host a DC fast charging station. Deployment of charging stations at these potential locations will also require site host interest. At this time, however, California assumes that a NEVI-compliant site will be built in Ludlow.

Figure 20: Potential Charging Station Sites in Ludlow

Source: Google Maps

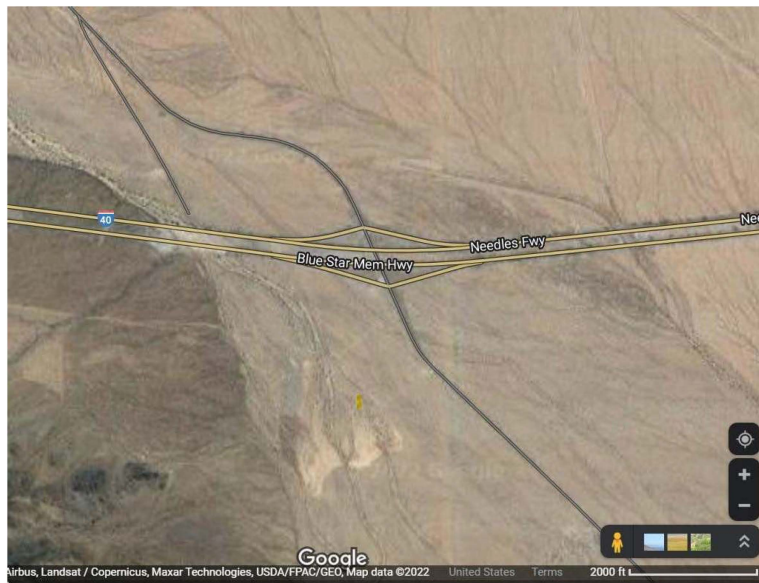
Assuming a site can be successfully built in Ludlow, there will still be a 59-mile stretch between stations in Ludlow and Fenner. There are only two highway exits between Ludlow and Fenner, at Kelbaker Road and Essex Road. However, these exits have no amenities available within one mile of the exits (Figures 21 and 22).

Figure 21: Kelbaker Road at Interstate 40



Source: Google Maps

Figure 22: Essex Road at Interstate 40



Source: Google Maps

Deploying a NEVI-site at either Kelbaker Road or Essex Road between Ludlow and Fenner would require development of a new site since there are no amenities at either exit. Since there are no other exits in that stretch, it is unlikely there would be any other suitable locations to build a NEVI-site. Attempting to deploy a NEVI-site between Ludlow and Fenner at either the Kelbaker Road or Essex Road exits is likely to pose extraordinary costs to build and operate a station in a location with no existing amenities. This could involve major electrical upgrades to deliver sufficient power to support a charging station. If a NEVI-eligible station is deployed in Ludlow, approval of the requested exception will allow the corridor to meet the goals and objectives of NEVI funding with a nine-mile deviation from NEVI requirements.

STATE OF CALIFORNIA

AUGUST 2024

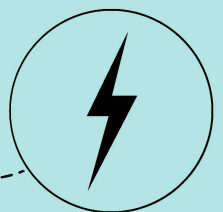
California's Deployment Plan for the National Electric Vehicle Infrastructure (NEVI) Program

ANNUAL UPDATE

PREPARED BY



CALIFORNIA
ENERGY COMMISSION



California's Deployment Plan for the National Electric Vehicle Infrastructure Program

2024 Update

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Table of Contents

List of Tables	4
List of Figures.....	4
Abbreviations & Terms.....	5
Introduction.....	6
Updates From Prior Plan	6
State Agency Coordination	7
Memoranda of Understanding with Other Agencies	8
Interagency Working Groups.....	8
California's State Funding Context.....	9
Public Engagement.....	10
California NEVI and NEVI-Related Workshops	10
October 2023 Joint Workshop on the FHWA's EV Charger Reliability and Accessibility Accelerator Notice of Funding Opportunity	10
November 2023 Preapplication Workshop for NEVI Solicitation 1	10
December 2023 CEC Staff Workshop on Electric Vehicle Charging Interoperability	11
March 2024 Joint Workshop on NEVI Program Concepts for the Second NEVI Solicitation	11
March 2024 Joint Workshop on EVC RAA Concepts.....	12
April 2024 Workshop on Revised Draft Regulations for Electric Vehicle Charger Tracking and Reliability	12
May 2024 Joint Planning and Scoping Workshop for NEVI Plan Update	13
Community Engagement Outcomes Report	14
Outreach to Priority Populations	14
Environmental Advocacy Letter Urging Truck Charging.....	15
May 2024 DACAG Meeting	16
Tribal Engagement.....	16
Native American Advisory Committee.....	16
Utility Engagement.....	17
Site-Specific Public Engagement.....	18
Plan Vision and Goals.....	18
Data Collection, Equity, and Reliability	19
A Vision for Zero-Emission Trucking.....	20
Electric Vehicle Charger Reliability and Accessibility Accelerator (EVC RAA) Implementation.....	21

Contracting.....	22
Status of Contracting Process	22
NEVI Solicitation 1	22
NEVI Solicitation 2	23
Awarded Contracts.....	26
Scoring Methodologies Utilized	32
Plan for Compliance with Federal Requirements.....	33
Civil Rights.....	34
Existing and Future Conditions Analysis.....	34
California Geography, Terrain, and Climate	34
California ZEV Ownership and ZEV Market Conditions	35
Freight	36
California's Goods Movement Sector	36
Policies Support the Transition to Zero-Emission Trucks.....	39
State Funding for Medium- and Heavy-Duty ZEV Infrastructure	39
Federal Funds Are Needed to Support Truck Electrification in California	40
Alternative Fuel Corridor Designations	41
Existing Charging Stations.....	43
EV Charging Infrastructure Deployment.....	43
Nonfederal Funding for Charging Infrastructure	46
Existing High-Powered EV Charging Stations	47
Planned Charging Stations.....	49
Planning Towards a Fully Built-Out Determination	49
EV Charging Infrastructure Deployment After Build-Out	49
Implementation	50
California's Electric Grid.....	50
California's Electric Utilities	51
Equity Considerations for Priority Populations.....	51
Identification and Outreach to Disadvantaged Communities in the State	51
Process to Identify, Quantify, and Measure Benefits to Priority Populations	54
Labor and Workforce Considerations	56
Physical Security and Cybersecurity	58
Physical Security and Cybersecurity Practices	58
Cybersecurity Plan	59
Continuous Improvement and Cybersecurity Scorecard	59

Program Evaluation	60
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List of Tables

Table 1: Projected CEC Clean Transportation Program Allocations for ZEV Infrastructure: Fiscal Years 2024-25 to 2027-28 (millions)	9
Table 2: 2024 DACAG Membership	15
Table 3: 2024 NAAC Membership.....	17
Table 4: The Six Corridor Groups Eligible for Solicitation 1	23
Table 5: Proposed Awards from NEVI Solicitation 1 (GFO-23-601)	27
Table 6: Proposed Station Locations by Interstate or State Route.....	28
Table 7: Summary of GFO-23-601 Evaluation Criteria	33
Table 8: Estimated Number of Stations and Time Estimate to Achieve Fully Built-Out Status	49
Table 9: Equity Benefits from Solicitation 1 Measured in Five-Year Increments	54

List of Figures

Figure 1: Northern California Corridors in Solicitation 2.....	24
Figure 2: Southern California Corridors in Solicitation 2.....	24
Figure 3: Station Locations in Northern California for Proposed Awards in Solicitation 1..	31
Figure 4: Station Locations in Southern California for Proposed Awards in Solicitation 1 .	32
Figure 5: Phases 1 and 2 of the National ZEF Network.....	37
Figure 6: Estimated Average Daily Volumes for Trucks on National Highway System.....	37
Figure 7: Truck Traffic Assessment of California Corridors	38
Figure 8: "Top 6" Freight Corridors Identify.....	38
Figure 9: Alternative Fuel Corridor Designations Through Round 7.....	42
Figure 10: Existing Public DC Fast Charging and Level 2 Charging Stations in California.	44
Figure 11: Existing Public DC Fast Charging and Level 2 Charging Stations in Northern California	45
Figure 12: Existing Public DC Fast Charging and Level 2 Charging Stations in Southern California	46
Figure 13: Existing High-Powered DC Fast Charging Stations and Non-NEVI DC Fast Charging Stations	48
Figure 14: Locations of AFCs and Priority Populations in California	53

Abbreviations & Terms

Abbreviation	Term
AFC	Alternative Fuel Corridor
AFDC	Alternative Fuels Data Center
CalSTA	California State Transportation Agency
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CEC	California Energy Commission
CFI	Charging and Fueling Infrastructure Discretionary Grant Program
CCS	Combined Charging System
CFMP	California Freight Mobility Plan
CPUC	California Public Utilities Commission
CTC	California Transportation Commission
CTP	Clean Transportation Program
DAC	Disadvantaged communities
DACAG	Disadvantaged Communities Advisory Group for CEC and CPUC
DCFC	Direct Current fast charger
Deployment Plan	California's National Electric Vehicle Infrastructure Deployment Plan
EV	Electric vehicle
EV-ChART	Electric Vehicle Charging Analytics and Reporting Tool
EVC RAA	Electric Vehicle Charger Reliability and Accessibility Accelerator
EVITP	Electric Vehicle Infrastructure Training Program
EVSE	Electric vehicle supply equipment
FHWA	Federal Highway Administration
GO-Biz	Governor's Office of Business and Economic Development
Joint Office	Joint Office of Energy and Transportation
LIC	Low-income community
NAAC	Native American Advisory Committee
NEVI	National Electric Vehicle Infrastructure Formula Program
Priority Populations	In this document, priority populations include California-designated disadvantaged or low-income communities and federal Justice40 communities
ZEV	Zero-emission vehicle

Introduction

The California Department of Transportation (Caltrans) and the California Energy Commission (CEC) are pleased to submit the 2024 National Electric Vehicle Infrastructure (NEVI) Deployment Plan Update to the Federal Highway Administration (FHWA) and Joint Office of Energy and Transportation (Joint Office). California's NEVI Agencies continue to be active in NEVI planning and administration since the first plan was submitted in August 2022.

Completion of California's first NEVI solicitation (Solicitation 1), including a notice of proposed awards, represents the state's major milestone since releasing the 2023 NEVI Plan Update. These proposed awards include 70 charging stations and more than 500 charging ports. Planning for the second solicitation is underway with an anticipated solicitation release date in fall 2024.

Updates From Prior Plan

These sections of California's NEVI Deployment Plan Update have been updated following the guidance and template issued by the Joint Office:

- **EV charging infrastructure deployment:** Results from the state's first solicitation were released June 3, 2024. The CEC announced \$37.7 million in proposed awards covering 70 new stations and more than 500 charging ports. The six corridor segments in Solicitation 1 cover some of the most heavily traveled freeway and highway segments in California.

Planning for the second NEVI solicitation (Solicitation 2) is underway and is scheduled for release in fall 2024. This solicitation will include the 17 remaining corridor groups and cover all remaining Alternative Fuel Corridor segments through Round 7. Solicitation 2 will provide \$100 million in funding for 120 stations with nearly 600 ports. A planning and scoping workshop was held March 12, 2024, to explore concepts for Solicitation 2.

California's \$63.7 million Electric Vehicle Charger Reliability and Accessibility Accelerator (EVC RAA) award is expected to fund an additional 1,302 NEVI-compliant ports.

- **ZEV market conditions:** Light-duty zero-emission vehicle (ZEV) sales in California in 2023 increased 28 percent from 2022, with more than 441,000 vehicles sold. ZEV sales reached a new high in the third quarter of 2023 at 26.7 percent of total vehicles sold; cumulative ZEV sales are more than 1.8 million through 2023. Tesla is the second-highest selling vehicle manufacturer in the state.
- **Truck charging infrastructure deployment:** Caltrans and the CEC introduced a strategy to devote a portion of future NEVI funding for truck charging projects.

- **Agency coordination:** Caltrans and the CEC completed an interagency agreement governing implementation of the EVC RAA program. Caltrans was awarded \$63.7 million to fund the repair, replacement, or addition of 1,302 ports. Building off the partnership developed in the state's NEVI program, Caltrans will provide oversight of this program, and the CEC will lead its implementation.
- **Plan vision and goals:** The CEC issued new draft regulations for electric vehicle (EV) charging reliability in the report *Tracking and Improving Reliability of California's Electric Vehicle Chargers*.¹
- **Public engagement:** Caltrans and the CEC continue to be active with public engagement since the first plan was filed. Seven major public workshops and several stakeholder meetings have been held since September 2023. This public engagement includes targeted outreach to priority populations², tribes, and utilities.
- **Equity considerations for priority populations:** Caltrans and the CEC reported on the 10 benefit categories developed in the 2023 NEVI Plan Update.
- **Labor and workforce considerations:** The CEC completed an interagency agreement with the California's State Employment Training Panel regarding implementation of the Electric Vehicle Infrastructure Training Program (EVITP) in California.
- **Program evaluation:** Caltrans developed a set of metrics for assessing the progress and outputs of NEVI projects. The California NEVI Agencies will apply these metrics to all applicable phases of NEVI administration.

State Agency Coordination

Caltrans and the CEC continue to collaborate closely on issues related to the planning and administration of NEVI, as well as affiliated topics such as the U.S. Department of Transportation's Charging and Fueling Infrastructure Discretionary Grant Program (CFI) and EVC RAA. The California NEVI Agencies are again collaborating with the Oregon Department of Transportation, Washington State Department of Transportation, and partner state agencies to prepare another round of applications for interstate truck charging under the CFI grant process. The CEC and Caltrans are collaborating with several California ports for a port-related CFI application for drayage truck electrification.

¹ Schell, Dustin, Ralph Lee, and Michael Dioha. (2024). [Tracking and Improving Reliability of California's Electric Vehicle Chargers](#). California Energy Commission. Publication Number: CEC-600-2024-055-D2.

² In this document, priority populations include California-designated disadvantaged or low-income communities and federal Justice40 communities.

Memoranda of Understanding with Other Agencies

The California NEVI Agencies completed an interagency agreement that will govern implementation of the \$63.7 million EVC RAA award. The interagency agreement establishes clear roles and responsibilities for administering the EVC RAA award. It designates the CEC as the responsible state agency for administering and allocating California's share of EVC RAA funding. The interagency agreement also establishes Caltrans as the state agency responsible and accountable to the FHWA for overseeing federal funds and the CEC consistent with the Stewardship and Oversight Agreement between Caltrans and the FHWA. The interagency agreement received approval from the CEC during its public meeting May 8, 2024, before receiving approval by the California Department of General Services on July 2, 2024.

Interagency Working Groups

Caltrans and the CEC continue to collaborate with the California State Transportation Agency (CalSTA), the California Transportation Commission (CTC), the Governor's Office of Business and Economic Development (GO-Biz), the California Public Utilities Commission (CPUC), and the California Air Resources Board (CARB). CalSTA is California's lead policy agency for transportation. CARB is the lead California agency for zero-emission vehicle regulations and vehicle funding. The CEC is the state's lead agency in zero-emission vehicle infrastructure, related policy and planning, and funding. GO-Biz plays a key convening role in ZEV coordination through the development of California's *Zero-Emission Vehicle (ZEV) Market Development Strategy*,³ to which several state agencies contribute.

The CEC and Caltrans continue to work closely with CARB on issues germane to NEVI, including truck charging, heavy-duty vehicle demonstrations, hydrogen station development, and zero-emission infrastructure policy issues. CARB is also responsible for regulations like the Advanced Clean Cars II and Advanced Clean Trucks and Fleets Rules, which help drive demand for zero-emission charging and hydrogen fueling infrastructure. CARB also administers the state's Clean Vehicle Rebate Program (CVRP), which is a light-duty vehicle incentive program, and the Hybrid and Zero-Emission Truck and Bus Voucher Incentive, a voucher program for medium- and heavy-duty vehicles. The CEC and Caltrans also continue to work with the CPUC regarding utility and grid upgrades needed to support charging infrastructure through NEVI and other public investments.

Nationally, the California NEVI Agencies are regular participants in the Joint Office's regional coordinating meetings, as well as the forums hosted by the American Association of State Highway and Transportation Officials and the National Association of State Energy Officials.

³ Governor's Office of Business and Economic Development. "[Zero-Emission Vehicle Market Development Strategy](#)."

Internationally, Caltrans is working with federal, state, and local partners in Mexico and the United States to update the 2021 California-Baja California Border Master Plan⁴ to address ZEV infrastructure needs for heavy-duty vehicles at and near land ports of entry.

California's State Funding Context

For the second year in a row, California has reduced spending to cover a budget shortfall. The enacted 2024-25 Budget solves a \$46.8 billion budget deficit by reducing expenditures by \$16 billion. The spending reductions include a nearly 8 percent cut to state operations and a targeted elimination of 10,000 unfilled state positions.⁵

For the 2024–2025 state fiscal year, the CEC's Clean Transportation Program will need to reduce funding sharply for several zero-emission infrastructure categories from the earlier fiscal years when billions were allocated for ZEV infrastructure and vehicles. Table 1 shows current Fiscal Year 2024–2025 investments in zero-emission infrastructure and projected investments for Fiscal Years 2025–2026 through 2027–2028.⁶

Table 1: Projected CEC Clean Transportation Program Allocations for ZEV Infrastructure: Fiscal Years 2024-25 to 2027-28 (millions)

Infrastructure Category	FY 2024–25	FYs 2025–28
Light-Duty Electric Vehicle Charging	\$40	\$619
Medium- and Heavy-Duty Truck Charging	\$38.2	\$0
Hydrogen Refueling	\$15	*
Drayage Truck Infrastructure	\$0	\$149
ZEV School Bus Infrastructure	\$0	\$125
Clean Truck, Bus, and Offroad Infrastructure	\$0	\$226
Port-Related ZEV Infrastructure	\$0	\$130
Totals	\$93.2	\$1,249

Source: CEC Staff

*Allocations for future fiscal years have not yet been proposed, but the CEC is required to spend at least \$15 million per year on hydrogen projects.

California continues to lead the nation, and much of the world, in ZEV sales and uptake. However, more charging infrastructure is needed to achieve greater adoption and meet the state's policy goals. Federal funds are essential to a broad and equitable network, especially given the state's second year of budget shortfall.

As described in the Plan Vision and Goals section, California projects needing approximately 1 million chargers (including 39,000 direct-current fast chargers) to support 7.1 million light-duty plug-in electric vehicles in 2030. To support medium- and heavy-duty plug-in electric vehicles, California will need about 114,500 chargers (109,000 depot chargers and 5,500 en route chargers) for 155,000 vehicles in 2030. This

⁴ California Department of Transportation. "[California-Baja California Border Master Plan](#)."

⁵ California Department of Finance. [California State Budget – 2024-25](#).

⁶ Tuggy, Benjamin. (2024). [2024-2025 Investment Plan Update for the Clean Transportation Program](#), California Energy Commission. Publication Number: CEC-600-2024-047-SD.

infrastructure is key to supporting the transition to zero-emissions vehicles needed to meet the state's 2030 and 2035 carbon reduction and clean air goals.⁷

Public Engagement

Since filing the NEVI Plan Update in September 2023, CEC and Caltrans have hosted seven workshops related to NEVI deployment, EVC RAA, and charging-related technical issues:

- October 2023: Workshop on EVC RAA Funding Opportunity
- November 2023: Pre-Application Workshop for First NEVI Solicitation
- December 2023: Workshop on Interoperability for Light-Duty Charging
- March 2024: Solicitation Concepts for Second NEVI Solicitation
- March 2024: EVC RAA Solicitation Concepts
- April 2024: Workshop on Revised Draft Regulations for Electric Vehicle Charging
- May 2024: Planning and Scoping Workshop for 2024 NEVI Plan Update

The CEC and Caltrans will host an additional “preapplication” workshop for the second NEVI solicitation once the solicitation is released. That workshop will inform potential applicants of the specific technical, financial, experiential, and administrative requirements needed to develop an eligible application for the second NEVI solicitation.

California NEVI and NEVI-Related Workshops

October 2023 Joint Workshop on the FHWA’s EV Charger Reliability and Accessibility Accelerator Notice of Funding Opportunity

Caltrans and the CEC hosted a joint workshop October 20, 2023, to present the concepts and requirements for the EVC RAA notice of funding opportunity. The workshop presentation described:

- Program funding levels.
- Program requirements to meet 23 CFR Section 680 regulations.
- The need for a competitive phase of funding during states’ implementation of the program.
- The 12-month requirement to have repairs and upgrades completed.
- U.S. Department of Energy National Renewable Energy Laboratory’s approach to identifying the eligible chargers, operating companies, and site hosts.

November 2023 Preapplication Workshop for NEVI Solicitation 1

The CEC conducted a preapplication workshop November 9, 2023, for the first NEVI solicitation.⁸ CEC staff conducts preapplication workshops after a solicitation has been

⁷ *Ibid.*

⁸ California Energy Commission. (2023, November 9). [“Pre-Application Workshop – GFO-23-601 – California’s National Electric Vehicle Infrastructure Formula Program.”](#)

released but before the deadline for applications. Staff reviewed in detail all the application requirements needed for a successful application. Preapplication workshops are followed by a comment period, and staff prepares a written question and answer document based on comments and questions received.

December 2023 CEC Staff Workshop on Electric Vehicle Charging Interoperability

CEC staff provided an overview of charging interoperability in North America, a vision for broad interoperability, and steps to achieve broad interoperability, including possible future CEC actions.⁹ As with the April 2024 CEC staff workshop on EV charger tracking and reliability regulations, this workshop is not part of NEVI *per se* but directly addresses important policy and technical issues required to ensure convenient and reliable EV charging experiences.

The CEC's policy statement on interoperability and proposed regulations for EV charger reliability correspond to, and support, federal standards and policy goals for interoperability and reliability.

The workshop topics included:

- Background on the North American charging ecosystem and implications for interoperability.
- A CEC vision for "broad interoperability": A future where any driver with any EV can easily charge at any charger on any network.
- Steps to achieve broad interoperability, including potential private industry and public agency actions.
- Presentation and discussion on the CEC Policy Statement on Interoperability.¹⁰

March 2024 Joint Workshop on NEVI Program Concepts for the Second NEVI Solicitation

Caltrans and the CEC hosted a joint workshop on March 12, 2024 to present the proposed structure for the state's second NEVI solicitation.¹¹ Staff proposed a \$100 million solicitation covering all 17 of the remaining corridor groups along the state's Alternative Fuel Corridors (AFCs) through Round 7. The proposed solicitation would cover 120 stations with nearly 600 ports and is estimated for release in fall 2024.

The proposed concepts for Solicitation 2 would have required an applicant to include a project from both the top-half and lower-half of the corridor group rankings in a single application. The awardee would then complete stations in the higher-ranked corridor group before working on the stations in the lower-ranked group. This requirement was proposed primarily to not overextend applicants' capacity for project delivery.

⁹ California Energy Commission. (2023, December 1). ["Staff Workshop on Electric Vehicle Charging Interoperability."](#)

¹⁰ California Energy Commission. (2023, November 14). [Statement on Charging Interoperability.](#)

¹¹ California Energy Commission. (2024, March 12). ["Joint Workshop on California Electric Vehicle Infrastructure \(NEVI\) Formula Program Concepts – Second Solicitation."](#)

Staff presented discussion questions for the participating stakeholders:

- Is there industry capacity to proceed with the proposed size of Solicitation 2?
- What do you think about the two-phased projects and stand-alone projects?
- Is the corridor group framework working?
- Any feedback on specific corridor groups?
- What is an appropriate per charging port estimate for the total project cost?
- Is the proposed match share requirement appropriate?
- How can disadvantaged and low-income community benefits be strengthened?
- How can we facilitate participation of small businesses or enterprises owned by disabled veterans, women, or lesbian, gay, bisexual, or transgender persons?

The workshop had 116 attendees. Nine participants submitted written comments.

Stakeholder feedback at the workshop and in subsequent comment letters indicated that the originally proposed concept would present challenges for applicants to apply for NEVI funding, given the large scope of two projects with requirements for several sites in a single application.

Most participants were supportive of the proposal to offer all remaining AFCs in Solicitation 2. Conversely, several stakeholders expressed support for fewer stations to be required per NEVI project to allow charging developers or site hosts with fewer locations under their control to pursue NEVI funding. Another common comment was the need to support medium- and heavy-duty EV charging infrastructure in the state's NEVI solicitations.

Staff revised the parameters for Solicitation 2 based on this feedback, as described in the Contracting Section, and will release an updated solicitation concept for the public prior to solicitation release.

March 2024 Joint Workshop on EVC RAA Concepts

California was awarded \$63.7 million to fund the repair, replacement, or addition of 1,302 chargers under EVC RAA. The CEC and Caltrans hosted a joint workshop to solicit feedback on the proposed structure and requirements for California's EVC RAA grant funding opportunity.¹² The workshop had 55 attendees.

April 2024 Workshop on Revised Draft Regulations for Electric Vehicle Charger Tracking and Reliability

Governor Newsom signed Assembly Bill 2061 in September 2022 (Ting, Chapter 345, Statutes of 2022). This bill requires the CEC to establish uptime recordkeeping and reporting requirements for chargers funded through an incentive by a California state

¹² California Energy Commission. (2024, March 27). "[Joint Workshop on California Electric Vehicle Charger Reliability and Accessibility Accelerator \(EVC RAA\) Program Concepts.](#)"

agency or an expense to ratepayers. The CEC is developing a regulation under AB 2061.¹³ Staff held a workshop on the proposed AB 2061 regulations in April 2024.¹⁴

The requirements of this regulation will align with, and add to, the uptime reporting requirements of 23 CFR Section 680 with minimal variances. NEVI-funded chargers will not have to comply with the reliability and data sharing requirements of these regulations unless they also received an incentive from a state agency or through a charge on ratepayers.

May 2024 Joint Planning and Scoping Workshop for NEVI Plan Update

In this workshop, the CEC and Caltrans staff solicited stakeholder input on the state's 2024 NEVI Plan Update and future third NEVI Solicitation. Staff provided status reports on the first and second solicitations, as well as the EVC RAA solicitation and plans for additional CFI applications for truck charging and hydrogen fueling.

Solicitation 2 would cover all remaining corridor segments through Round 7 of the AFC designations, accounting for more than 7,000 miles of freeways and highways. Beginning with Solicitation 3, staff proposes shifting some portion of the \$384 million formula allocation to support charging projects for medium- and heavy-duty vehicles.¹⁵

More than 70 stakeholders participated in the workshop or provided written comment.¹⁶ Common or notable points of feedback from stakeholders included:

- **Truck original equipment manufacturers:**
 - Support shifting NEVI funds to truck charging.
 - Need to convene stakeholder group to develop standards.
 - Future proof sites to accommodate Megawatt Charging System chargers.
- **Truck charging station developers:**
 - Support using NEVI funds for truck charging stations.
 - Definition of "public station" may be problematic for logistics operators due to the scheduling requirements for efficient trucking.
 - Commercial fleet operators need certainty: scheduling and reservations should be allowed.
 - Trucks have larger station footprint and power requirements than light-duty vehicles and need more flexibility in siting.

¹³ California Energy Commission. "[Electric Vehicle Charging Infrastructure Reliability and Data Standards](#)."

¹⁴ California Energy Commission. (2024, April 30). "[Workshop on Revised Proposed Regulations for Tracking and Improving Reliability of California's Electric Vehicle Chargers](#)."

¹⁵ California Energy Commission. (2024, May 10). "[Joint Workshop on the 2024 Update to the NEVI Formula Program Deployment Plan](#)."

¹⁶ California Energy Commission. "[2024 NEVI Plan Update Docket 22-EVI-03](#)."

- **California Fuel and Convenience Alliance:**
 - Sixty percent of retail gas stations are owned by independents, many of whom are first-generation immigrants.
 - Caltrans and the CEC should leverage existing fuel retail stations for charging.
 - The bundled corridor approach bars independents from full participation in NEVI solicitations.
- **Environmental advocacy and environmental justice organizations:**
 - Requested the use of NEVI funds for truck charging projects, as highlighted in the Outreach to Priority Populations section below.

Community Engagement Outcomes Report

The CEC and Caltrans have designed NEVI outreach to ensure that all stakeholders involved with and affected by the NEVI Formula Program have an opportunity to understand the state's intent, process, and goals for planning, designing, constructing, and operating the NEVI-funded charging stations. One goal is to ensure equitable access and competitiveness for stakeholders seeking to bid on NEVI-funded projects. Another goal is to provide sufficient information to stakeholders who may be concerned about the location or configuration of specific station proposals and create an opportunity for such concerns to be voiced in a meaningful and effective manner.

The methods for this notification and outreach include:

- Broadly advertised public workshops using the stakeholder listservs developed for the CEC's Clean Transportation Program, which is the state's designated program for charging infrastructure funding and development.
- Focused outreach to organizations representing priority populations.
- Leveraging existing tribal outreach and consultation programs developed by Caltrans and the CEC.

Due to California's large size, public workshops are the primary tool used to communicate the agencies' intent and plans for the NEVI Formula Program. By state law, each public workshop must be publicly noticed 10 days in advance of a workshop. Each notice must include the workshop agenda, directions on how to access and participate in the workshop's virtual presentations, directions on how to file written comments, and instructions on how to contact the CEC Public Advisor's Office for any needed assistance.

Outreach to Priority Populations

Caltrans and the CEC have their own respective systems for engaging and consulting with representatives of priority populations and tribes. Caltrans, in partnership with CalSTA and the California Transportation Commission, obtains input from the 16-member Interagency Transportation Equity Advisory Committee, established in October

2022. The CEC obtains input from the Disadvantaged Communities Advisory Group (DACAG),¹⁷ the legislatively created body that advises the CEC and the California Public Utilities Commission (CPUC) on energy and transportation issues in California (Table 2). CEC staff has consulted with the DACAG during preparation of the original NEVI Plan and each NEVI Plan Update, providing briefings on what NEVI is, where the corridors are, and what the process will be for the solicitations. The DACAG also has a Transportation Electrification Subcommittee, with whom CEC staff consults on more technical issues.

Table 2: 2024 DACAG Membership

Organization	Representative
The Greenlining Institute	Román Partida-López, Chair
Rising Sun Center for Opportunity	Julia Mary Popolizio Hatton, Vice Chair
Marin Clean Energy	Stephanie Chen
Arrowhead Solutions	Fred Beihn
West Modesto Community Collaborative	Abimael Chavez-Hernandez
Strategic Actions for a Just Economy	Chelsea Kirk
Physicians, Scientists, and Engineers for Healthy Energy	Elena Krieger
Central California Asthma Collaborative	Sarah Sharpe, Secretary
Los Angeles Brotherhood Crusade	Curtis Silvers
OC Goes Solar	Senait Forthal

Source: CEC Staff

Environmental Advocacy Letter Urging Truck Charging

On March 29, 2024, a coalition of 10 environmental advocacy and environmental justice organizations, including several members of the DACAG, sent a letter to Director Tony Tavares of Caltrans and Chair David Hochschild of the CEC urging them to shift NEVI funds away from light-duty charging and to focus on charging for medium- and heavy-duty trucks. The letter stated: “Investing in medium- and heavy-duty charging infrastructure is amongst the single most important ways to provide benefits to disadvantaged [low-income communities] because medium- and heavy-duty diesel trucks disproportionately impact these communities.”¹⁸ The letter cited a recent academic study that stated that ongoing exposure to high levels of particulate matter and ozone causes more than \$330 billion in annual health losses in California.¹⁹

¹⁷ The DACAG was established in Senate Bill 350 (De León, Chapter 547, Statutes of 2015), the Clean Energy and Pollution Reduction Act of 2015.

¹⁸ Los Angeles County Electric Truck and Bus Coalition, Vanessa Rivas Villanueva, Adrian Martinez, Andrea Marpillero-Colomina, Bill Magavern, Marven Norman, Janet Cox, Rita Clement, Katherine Garcia, Dakoury Godo-Solo, and Kevin Hamilton. (2024, March 29). [Letter to California Energy Commission Chair David Hochschild and California Department of Transportation Director Tony Tavares](#). Docketed June 20, 2024.

¹⁹ Wang, Tianyang, Bin Zhao, Kuo-Nan Liou, Yu Gu, Zhe Jiang, Kathleen Song, Hui Su, Michael Jerrett, and Yifang Zhu. (2019). “[Mortality Burdens in California Due to Air Pollution Attributable to Local and Nonlocal Emissions](#),” *Environment International*, Volume 133, Part B, 105232.

The coalition also stated in its letter that NEVI funds and the solicitation and grant-making process provide an opportunity to create strong workforce standards that can benefit local communities in disadvantaged areas. Feedback from these groups has contributed greatly to the state's intentions to explicitly support truck charging with NEVI funding in future solicitations.

May 2024 DACAG Meeting

CEC staff met with the DACAG on May 17, 2024, and provided an informational and status briefing on the NEVI solicitations and preparation of the 2024 NEVI Plan Update, noting that more than \$200 million would remain in formula funding after the first two solicitations were released. Staff also described the efforts of Caltrans and the CEC to implement EVC RAA and continue applying for CFI funding for truck charging and hydrogen refueling. The briefing acknowledged the environmental coalition letter, and staff stated that a primary goal in preparing the third NEVI solicitation will be assessing the potential to shift significant NEVI funding to truck charging.

Some members of the DACAG responded with the following recommendations:

- Appreciated the seriousness with which the CEC and Caltrans leadership showed in reviewing the letter.
- Continued to urge the California NEVI Agencies to shift funding to truck charging.
- Expressed concern about the level of local engagement and encouraged the NEVI Agencies to engage local community-based organizations through the solicitation process.
- Encouraged the NEVI Agencies to regard and engage **people**, not just describe the places they live.

CEC Commissioner Patricia Monahan expressed appreciation for the DACAG's work with NEVI and acknowledged the recommendation to use NEVI funds for truck charging. She also discussed the state's budget process and the severe budget shortfall. CPUC Commissioner Darcie Houck also described the "tough budget year." She said a key topic for her is tackling the utility interconnection delays, saying they adversely affect EV drivers.

Tribal Engagement

California is home to 109 federally recognized Native American tribes with nearly 100 reservations and rancherias. Caltrans and the CEC have a similar process for consultation with tribes in California; Caltrans works through its Native American Advisory Committee (NAAC), and the CEC works through its Office of the Public Advisor, Energy Equity, and Tribal Affairs.

Native American Advisory Committee

In 1996, the NAAC was established at Caltrans to ensure the Department receives direct advice from tribal governments on issues pertaining to all modes of transportation

within California. Members of the NAAC advocate for all Native Americans of California and are nominated by tribes throughout the state (Table 3).

Caltrans staff consulted with the NAAC on June 6, 2024, regarding California's NEVI Plan Update. In this meeting, Caltrans provided an overview of the state's first NEVI solicitation, shared a strategy for the second solicitation, and highlighted the overlap between the corridors from the second solicitation and federally recognized tribal lands using California's NEVI Interactive Map.

Tribal representatives were interested in evaluating how the NEVI program may be a revenue-generating opportunity, and Caltrans staff provided further consultation with individual tribes, as requested. Caltrans staff also discussed intentions to fund medium- and heavy-duty charging stations along AFCs through the NEVI program and asked for feedback on this and desired future off-corridor project types.

Table 3: 2024 NAAC Membership

Member Name	Tribe or Native Government	Region
Jacque Hostler-Carmesin	Trinidad Rancheria	Northern
Richard Warner	Elk Valley Rancheria	Northern
Jeff Hodge	Hoopa Valley Tribe	Northern
Misty Rickwalt	Karuk Tribe	Northern
Michael DeSpain	Buena Vista Rancheria of Me-Wuk Indians	Central
Paul Irwin	North Fork Rancheria of Mono Indians of California	Central
Esther Fillingame	Lone Pine Paiute Shoshone Reservation	Central
Orval Elliott Jr.	Hopland Band of Pomo Indians	Central
Daniel Salgado Sr.	Cahuilla Band of Indians	Southern
Erica Pinto	Jamul Indian Village of CA	Southern
Margaret Park	Agua Caliente Band of Cahuilla Indians	Southern
Lorenda Sanchez	California Indian Manpower Consortium	Statewide

Source: Caltrans Staff

Utility Engagement

The CEC works closely with California's publicly owned and investor-owned utilities on a wide range of energy and grid topics, often in collaboration with the CPUC. The CEC also works with trade organizations like the California Electric Transportation Coalition, a consortium of the state's major utilities and EV charging companies, and the West Coast Clean Transit Corridor Initiative, a consortium of the major West Coast utilities working on truck-charging issues.

Caltrans and the CEC met with the following representatives from the California Electric Transportation Coalition on April 16, 2024, to discuss the first NEVI solicitation and the forms and processes that were used for the utility grid capacity assessments:

- Los Angeles Department of Water and Power
- Pacific Gas and Electric Company
- Sacramento Municipal Utility District
- San Diego Gas & Electric
- Southern California Edison

The primary purpose of the meeting was for the CEC and Caltrans staff to hear about the utilities' experiences with solicitation applicants and using the utility verification form created for the first NEVI solicitation. The California Electric Transportation Coalition's representatives underscored the challenge of using one form, as each utility has its own unique application process, and each utility representative described the challenge of reviewing and assessing a large number of applications close to the application deadline. Pacific Gas and Electric described how 53 utility verification forms were submitted to the utility near the application deadline, creating a significant workload. Other utilities described similar challenges. The group agreed to continue meeting to improve the standard utility verification form used by all applicants and utilities.

Subsequently, in June 2024, Los Angeles Department of Water and Power, Pacific Gas and Electric, San Diego Gas & Electric, and Southern California Edison, demonstrated their online tools for verifying available electrical capacity to CEC staff. The current plan for NEVI Solicitation 2 is to direct applicants to use these publicly available web resources as much as possible to self-verify electrical capacity at proposed charging station sites. Solicitation 2 will again identify utility contacts to assist solicitation applicants as needed. This strategy should reduce the burden on utility staff while providing solicitation applicants the ability to assess electrical capacity on their own as they evaluate possible sites.

Site-Specific Public Engagement

To date, the CEC and Caltrans have not hosted site-specific public or private meetings for the state's NEVI Formula Program. All public engagement has occurred through virtual, state-level public workshops, which enable widespread participation from stakeholders across the state. Small group meetings with members of the DACAG and its constituents have been held virtually.

Plan Vision and Goals

California is committed to reducing emissions from the transportation sector by increasing the adoption of zero-emission vehicles. Reducing transportation carbon, criteria, and particulate emissions is critical to improving air quality and reducing public health impacts to millions of Californians. Through legislation, regulatory action, and executive orders, California is making the transition across market segments ranging

from passenger cars to heavy-duty trucks.

On September 23, 2020, Governor Gavin Newsom signed Executive Order N-79-20,²⁰ setting the following zero-emission vehicle targets for California:

- One hundred percent of in-state sales of new passenger cars and light-duty trucks will be zero-emission by 2035.
- One hundred percent of medium- and heavy-duty vehicles operating in the state by 2045, where feasible, and by 2035 for drayage trucks will be zero-emission.
- One hundred percent of off-road vehicles and equipment operations will be zero-emission by 2035.

To support the 7.1 million light-duty EVs projected by 2030, the state will need 1 million chargers, including 39,000 DC fast chargers. In 2035, California's projected 15.2 million light-duty EVs will need 2.1 million chargers, including 83,000 DC fast chargers.²¹ The light-duty target includes public chargers, such as those at parks, shopping centers, hotels, public buildings, and so forth, and shared-private electric vehicle chargers, such as those at workplaces and multiunit dwellings.

Public funding, electric utility investment, and private investment have contributed to California's ZEV charging infrastructure networks, and all will continue to be essential to meeting future deployment goals. Funding through the NEVI Formula Program will be necessary to build out the state's EV corridors to ensure seamless interstate travel for EV drivers and will be complemented by state funding.

Data Collection, Equity, and Reliability

California's strategy to deploy EV charging infrastructure incorporates an interconnected network to simplify data collection and support the development of convenient, accessible, reliable, and equitable EV charging.

1. **Data collection:** Owner–operators of NEVI-funded stations will be required to collect and transmit all operational and maintenance data as defined in 23 CFR Sections 680.112 and 680.116(c). Operational data will be collected and transmitted quarterly, while maintenance data will be collected and transmitted annually. These requirements are being incorporated into the scope of work of NEVI grant agreements. All data will be made available to the FHWA through the Electric Vehicle Charging Analytics and Reporting Tool (EV-ChART).

²⁰ Office of Governor Newsom. (2020, September 23). "[Governor Newsom Announces California Will Phase Out Gasoline-Powered Cars & Drastically Reduce Demand for Fossil Fuel in California's Fight Against Climate Change.](#)"

²¹ Davis, Adam, Tiffany Hoang, Thanh Lopez, Jeffrey Lu, Taylor Nguyen, Bob Noltz, Larry Rillera, Dustin Schell, and Micah Wofford. (2023). [Assembly Bill 2127 Second Electric Vehicle Charging Infrastructure Assessment: Assessing Charging Needs to Support Zero-Emission Vehicles in 2030 and 2035](#), California Energy Commission. Publication Number: CEC600-2024-003-CMR.

2. **Equitable access:** All NEVI-funded stations will be fully accessible and available to all users. All stations will be Americans with Disabilities Act-compliant, have nondiscriminatory payment options in line with federal requirements, and must be well-lit. Furthermore, applicants are encouraged to include amenities such as accessible restrooms, where feasible.

California will continue to engage with communities, including disadvantaged, underserved, and rural communities, through workshops and outreach to ensure equitable and collective decision-making in solicitation design and program implementation. This engagement will ensure charger installations are meeting the needs of the communities they serve while providing seamless statewide access. See the Equity Considerations section for an overview of how California will prioritize equity and track benefits to communities.

3. **Network reliability:** NEVI-funded projects will conform to the reliability requirements of 23 CFR Section 680. Grant agreements will require funding recipients to report the required data through EV-ChART, which will be submitted to the FHWA upon the CEC's review and approval. In addition to meeting these minimum requirements, the CEC has included additional reliability reporting requirements in the state's first NEVI solicitation to align with state reporting standards. Funding recipients will be required to:
 - a. Collect and retain records of the following remote monitoring data:
 - i. Charger operative status using OCPP 2.0.1.
 - ii. Each charge attempt will be recorded through EV-ChART
 - iii. Each failed charging session and session error information will be reported through EV-ChART.
 - b. Generate and retain maintenance records for all preventive and corrective maintenance conducted on chargers.
 - c. Generate and retain records of inoperative charging ports.
 - d. Conduct annual preventive maintenance on all chargers and charging ports.
 - e. Conduct corrective maintenance within 10 business days.

These requirements will help ensure that chargers installed and operated with NEVI funds will be well maintained and meet the requirements of 23 CFR Section 680. Applicants will be required to report data for a minimum of five years from when the charger is operational.

A Vision for Zero-Emission Trucking

California's quest to decarbonize light-duty passenger vehicles is well underway; 25 percent of new car sales in the state are now electric vehicles, and more than 1.5 million ZEVs have been sold in the state. The next challenge is to decarbonize trucks, which are responsible for a large fraction of emissions from the transportation sector despite comprising a small fraction of vehicles on the road.

CARB's Advanced Clean Fleets and Advanced Clean Trucks regulations are forcing a technology shift to zero-emission propulsion. Beginning in Model Year 2024, sales requirements for zero-emission trucks steadily increase annually until the state's requirement for 100 percent zero-emission truck sales by Model Year 2036. A network of charging infrastructure to support this historic shift to zero-emission trucking is urgently needed.

When the second NEVI solicitation is complete, California will have funded all 7,000 miles of designated Alternative Fuel Corridors (through Round 7 of the nominating process) with at least four DC fast chargers at 50-mile intervals or less. California's NEVI Agencies then intend to focus a portion of NEVI formula funding on charging stations along Alternative Fuel Corridors that support the medium- and heavy-duty sectors. Stations that can serve medium- and heavy-duty trucks will require higher power levels and larger footprints than stations that prioritize light-duty vehicles.

For medium- and heavy-duty trucks, analysis by the CEC projects that 114,500 chargers will be needed in 2030 to support 155,000 vehicles: 109,000 low power (20–150 kW) depot chargers and 5,500 high power (350–1,500 kW) en route chargers.²² In 2035, California's 377,000 medium- and heavy-duty plug-in electric vehicles will need 264,500 chargers: 256,000 depot chargers and 8,500 en route chargers.²³

Caltrans and the CEC intend to consult with industry and other stakeholders to identify appropriate standards for truck charging stations. Technical standards used in existing truck charging programs such as the state's Charging and Refueling Infrastructure Transport in CALifornia Provided Along Targeted Highway Segments, Energy Infrastructure Incentives for Zero-Emission program, the Trade Corridor Enhancement Program, and the Port and Freight Infrastructure Program will also be reviewed. Ongoing consultation with the Joint Office will be needed as well. Please see the Freight section for a more detailed assessment of these issues.

Electric Vehicle Charger Reliability and Accessibility Accelerator (EVC RAA) Implementation

The Electric Vehicle Charger Reliability and Accessibility Accelerator was created through funding from the NEVI Formula Program at the national level. EVC RAA aims to improve reliability of existing EV infrastructure by funding the repair and replacement of existing, publicly accessible, nonoperational chargers across the United States.

Increasing EV adoption is critical to meeting California's climate goals, and increasing consumer confidence in EVs depends on access to reliable EV chargers. EVC RAA presents an opportunity to improve the reliability of California's existing EV charging network.

²² *Ibid.*

²³ *Ibid.*

Caltrans applied for EVC RAA grant funding in November 2023 and was awarded \$63.7 million in one-time funding in January 2024. Like NEVI, Caltrans will partner with the CEC to implement California's EVC RAA program. The CEC and Caltrans plan to leverage the CEC's existing grant solicitation process to distribute California's EVC RAA funds. The CEC is developing the EVC RAA solicitation and plans to release it in fall 2024. The solicitation will provide \$59.5 million to repair, replace, and add at least 1,302 ports to meet the NEVI Standards across California. A total of 3,516 ports at more than 1,500 stations across the state are eligible for the program, 55 percent of which are in Justice40 communities.

Contracting

Status of Contracting Process

As described in previous NEVI Deployment Plans, California is using the CEC's competitive solicitation process to administer funding under the NEVI Formula Program. This process emphasizes transparency and an equitable, objective review of each application.

NEVI Solicitation 1

The CEC released the state's first NEVI grant funding opportunity, GFO-23-601, "California's National Electric Vehicle Infrastructure Formula Program," in October 2023. Eighteen proposals were received to design, build, operate, and maintain new NEVI-compliant charging stations. The solicitation closed in January 2024, and the proposed awards were announced in June 2024. Please see the solicitation files on the CEC website for more detailed information.²⁴

Using the method described in the 2023 California NEVI Plan Update, staff divided the state's AFCs into corridor groups and ranked them using a series of prioritization factors described in the 2023 NEVI Deployment Plan Update. Some of the higher-value ranking factors included whether a corridor was part of an AFC along the interstate highway system, traversed Justice40 communities, or demonstrated future demand for high-powered charging based on modeling results, or a combination thereof.

Table 4 lists the six highest-ranked corridor groups that were included in GFO-23-601. This table updates Table 1 in the 2023 California NEVI Plan Update. The revised table reflects a reduction in the number of charging stations and new Combined Charging System (CCS) charging ports requested in the solicitation based on CEC analysis of existing charging stations that were likely to meet NEVI standards, making it unnecessary to install additional infrastructure around those locations.

In total, GFO-23-601 requested a minimum of 26 new charging stations and 270 charging ports. Each applicant to GFO-23-601 had to propose a project covering all segments of a corridor group that met the minimum number of stations and

²⁴ California Energy Commission. (2023, October 26). "[GFO-23-601 - California's National Electric Vehicle Infrastructure Formula Program](#)."

charging ports listed in Table 4.

Table 4: The Six Corridor Groups Eligible for Solicitation 1

Corridor Groups	Corridor Segments	Minimum New Stations	Total New Charging Ports
6A	I-5: South of Sacramento to Kettleman City	2	67
6B	I-5: South of Kettleman City to Santa Clarita	2	81
7	SR 58: (I-5/SR 58) Buttonwillow to Barstow	4	16
7	I-15: Hesperia to Nevada	2	38
7	I-40: Barstow to Needles	1	8
16	I-8: San Diego to El Centro	2	8
16	I-15: San Diego to Murrieta	2	8
16	I-805: San Diego to San Ysidro	1	4
19	I-210: Sylmar to Redlands	1	4
19	I-215: Murrieta to San Bernardino	2	8
19	I-405: Mission Hills to Irvine	1	4
20	I-110: Los Angeles to San Pedro	2	8
20	I-710: Los Angeles to Long Beach	2	8
20	I-605: Irwindale/Duarte to Seal Beach	1	4
20	I-105: El Segundo to Norwalk	1	4

Source: CEC staff

The proposed awards under GFO-23-601 are discussed in the Awarded Contracts section. As of August 2024, CEC staff is negotiating with the awardees to execute grant agreements in September through November 2024.

NEVI Solicitation 2

Preparation for Solicitation 2 is ongoing and expected for release in fall 2024. The CEC and Caltrans propose to fund all 17 of the remaining corridor groups with a \$100 million solicitation that would fund at least 120 charging stations and 598 DC fast charging ports. Figures 1 and 2 show the 17 corridor groups for Northern and Southern California proposed for inclusion in Solicitation 2.

Figure 1: Northern California Corridors in Solicitation 2



Source: CEC staff

Figure 2: Southern California Corridors in Solicitation 2



Source: CEC staff

The concepts presented at the March 2024 workshop included breaking the corridor group projects into two competitions, one called “two-part projects” and one called “stand-alone projects.” Stakeholders commented that they were not in favor of these concepts. Feedback from the workshop included the following points:

- **Do not require applicants to complete an entire corridor group:** Stakeholders expressed preference for individual corridor segments within a corridor group, arguing that individual corridor segments would increase competition and allow more diverse applicants. One also argued that partnerships (as promoted by Caltrans and the CEC to enable diverse participation) are difficult to make.
- **Do not require two-part projects or change how they would work:** Several commenters felt the two-part projects exacerbated the challenge with completing an entire corridor group and would reduce competition further by locking in one recipient to complete multiple corridor groups.
- **Include all remaining corridor groups:** Multiple commentors supported including all remaining corridor groups in the next solicitation; no commentors were against doing so. Accelerating deployment of corridor charging was supported by all.

In addition to incorporating the feedback above into the design of Solicitation 2, staff will also incorporate the following lessons from Solicitation 1:

1. **Maximum award amounts can be reduced.** Most Solicitation 1 applications requested funding levels that were significantly below the maximum award amounts offered for the respective corridor groups (\$150,000 per charging port). Many were close to half of the maximum. The proposed maximum awards presented in the workshop for Solicitation 2 assumed the same levels as in Solicitation 1; those maximum awards are being adjusted downward.
2. **“Required sites” can be eliminated.** Four of the six corridor groups in Solicitation 1 had one or more “required sites” — usually a junction of two AFCs wherein applicants were required to locate a charging station within one mile. The required sites were included to ensure end points of AFCs had stations nearby and NEVI requirements at AFC termini would be more than sufficient. However, with the FHWA NEVI Formula Program Guidance (June 11, 2024) that corridor termini must have a station located within 25 miles, the required sites now seem overly restrictive and unnecessary. There were also reports of price inflation at prospective station sites.

The NEVI Agencies will need to factor in the revised definition of “NEVI-Compliant Stations” for solicitation planning. Solicitation 1 assumed that existing stations meeting the location, port, and power requirements were NEVI-compliant, which meant that no new stations were required at these sites.

With clarification from the FHWA's NEVI Formula Program Guidance (updated June 11, 2024), staff revised the assumptions related to existing stations. It is apparent that all existing stations will need some level of improvement to become NEVI-compliant and meet all 23 CFR Section 680 requirements. Therefore, the number of stations needed to achieve fully built out status for NEVI is slightly greater than originally estimated.

Based on stakeholder feedback, lessons from Solicitation 1, and the new guidance on existing charging stations, staff is revising the Solicitation 2 concepts presented in March 2024 to:

- Reduce the burden of completing corridor groups by dropping the two-part project concept and requesting completion of corridor segments (for example, State Route 199) instead of full corridor groups (for example, U.S. Highway 101, State Route 199, and State Route 299). The idea of stand-alone projects that require only one or a few stations to complete will be retained.
- Reduce the maximum award per charging port, with possible additional funding if a battery energy storage system or onsite solar is included.
- Remove assumptions that existing charging stations will contribute to AFC buildout.
- Reduce evaluation criteria and application requirements to enable faster application development and evaluation, anticipating a higher volume of applications.

Awarded Contracts

The CEC received 18 applications to Solicitation 1 (GFO-23-601) from nine applicants. Notable takeaways from project applications include the following:

- **Projects came in at lower cost than anticipated:** CEC staff evaluated available EV charging equipment pricing and previous fast-charging awards to set a maximum award for each corridor group. The maximum awards offered up to \$150,000 per new charging port, which covers up to 50 percent of all costs related to designing, building, operating, and maintaining the new charging stations.

For example, the maximum award for Corridor Group 6A, with 67 new charging ports, was 67 multiplied by \$150,000, which totals \$10,050,000. As an example of how costs were lower than anticipated, the three applications received for Corridor Group 6A requested \$4,008,069, \$5,025,000, and \$8,522,138, respectively.

- **Several applicants preferred building more charging ports per station:** Even though GFO-23-601 requested more than the minimum of four 150 kW CCS charging ports per station along several corridors, several applicants expressed interest in building even more ports than that (for instance, the proposed award

for Corridor Group 6A will feature 121 ports rather than the 67 requested ports). For Solicitation 2, the NEVI Agencies will continue to assess the optimal number of ports to request per station.

- **Nearly all ports exceed the 150 kW minimum:** 84 percent (422 of 504) of the ports proposed for award for Solicitation 1 are 200 kW. Another 62 ports will be 175 kW, while 20 will be 150 kW.

The CEC announced 11 proposed awards on June 3, 2024, for a total of \$37,715,166.²⁵ Proposed awardees will provide \$53,232,945 in match funding or 59 percent of the \$90,948,111 in total project costs. CEC staff is coordinating with proposed awardees to develop grant agreements and to request project authorization to begin work. Although none of the grant agreements have been formally awarded as of the end of August 2024, the agreements are expected to be considered for approval in September, October, and November 2024. The proposed awards under Solicitation 1 (GFO-23-601) are shown in Table 5.

Table 5: Proposed Awards from NEVI Solicitation 1 (GFO-23-601)

Corridor Group	Proposed Award Recipient	Number of Stations	Number of Ports	Proposed Award Amount
6A	Skychargers, LLC	6	68	\$4,008,069
6A	Zero6 EV Charging CA I LLC	9	53	\$3,675,000
6B	Skychargers, LLC	3	76	\$2,965,854
6B	Zero6 EV Charging CA I LLC	10	77	\$6,075,000
7	Electrify America	11	62	\$6,488,372
7	Skychargers, LLC	3	30	\$3,665,627
7	Zero6 EV Charging CA I LLC	11	58	\$4,650,000
16	Sustainable Energies CA LLC	5	20	\$1,860,000
16	Tesla, Inc.	2	20	\$1,327,244
19	Sustainable Energies CA LLC	4	16	\$1,200,000
20	Sustainable Energies CA LLC	6	24	\$1,800,000
Totals		70	504	\$37,715,166

*Source: Notice of Proposed Awards for GFO-23-601*²⁶

The EV charging station locations included in these projects are listed in Table 6 and shown spatially in Figures 3 and 4. Adjustments to the station locations and number of ports per location are possible until the agreements for these projects are executed.

²⁵ California Energy Commission. (2024, June 3). "[GFO-23-601 Notice of Proposed Awards](#)."

²⁶ *Ibid.*

Table 6: Proposed Station Locations by Interstate or State Route

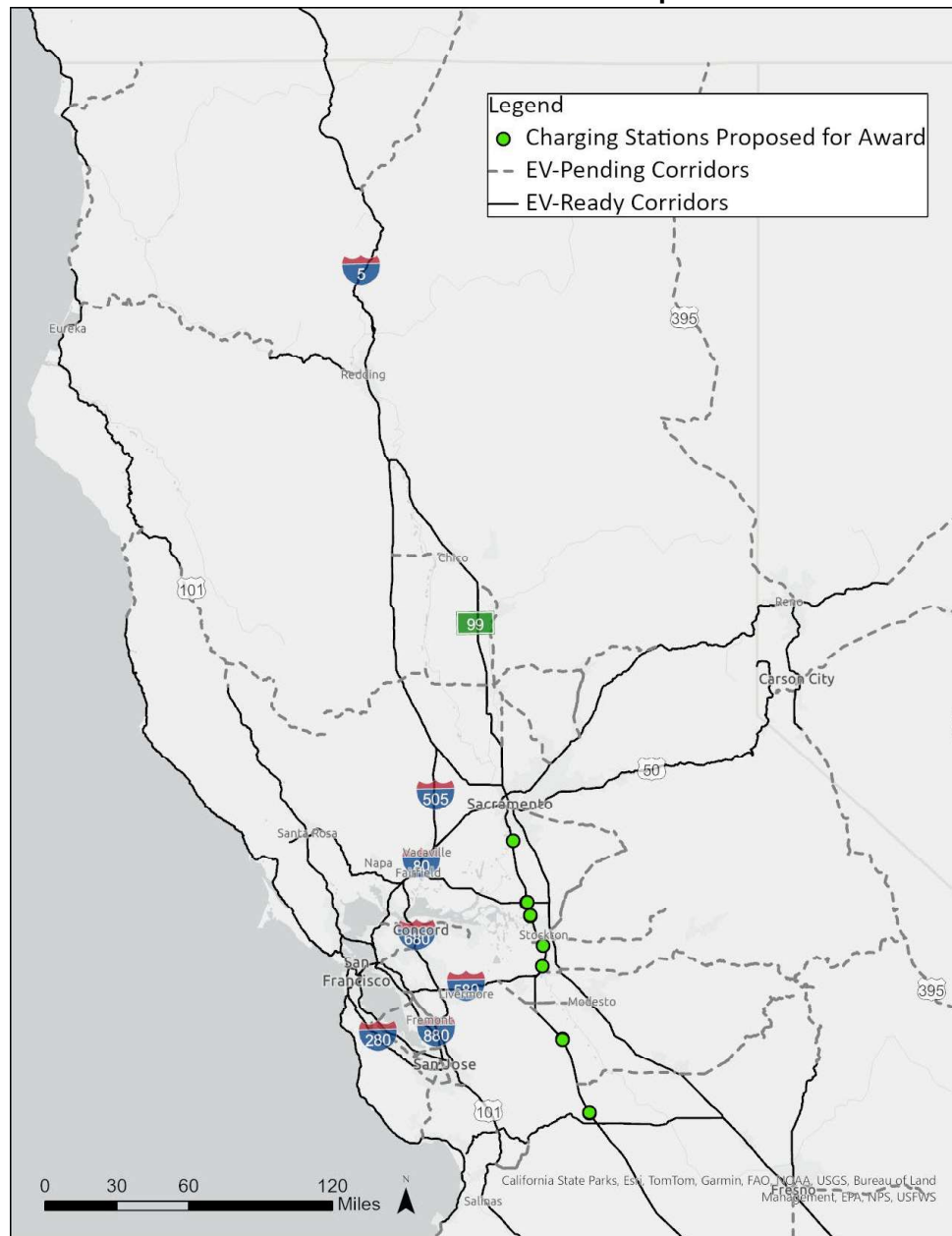
Interstate or State Route	Corridor Group	Station Address or Coordinates	Number of Ports
5	6A	9615 W Taron Dr, Elk Grove, CA 95757	4
5	6A	6437 W Banner St, Lodi, CA 95242	6
5	6A	15050 North Thornton Rd, Lodi, CA 95242	4
5	6A	15250 North Thornton Rd, Lodi, CA 95242	6
5	6A	10424 Trinity Parkway, Stockton, CA 95219	8
5	6A	10850 Trinity Parkway, Stockton, CA 95219	8
5	6A	613 Carolyn Weston Blvd, Stockton, CA 95206	4
5	6A	16542 Golden Valley Parkway, Lathrop, CA 95330	4
5	6A	2965 Annamarie Ave, Patterson, CA 95363	6
5	6A	55 Rogers Road, Patterson, CA 95363	6
5	6A	12754 CA-33, Gustine, CA 95322	4
5	6A	29025 Plaza Drive, Santa Nella, CA 95322	6
5	6A	25430 West Dorris Ave, Coalinga, CA 93210	11
5	6A	35.987862, -119.962495 (Kettleman City)	40
5	6B	33225 Hubert Way, Kettleman City, CA 93239	4
5	6B	21948 CA-46, Lost Hills, CA 93249	6
5	6B	24551 W Lerdo Hwy, Buttonwillow, CA 93206	6
5	6B	20238 Taft Hwy, Bakersfield, CA 93311	4
5	6B	9557 Copus Rd, Bakersfield, CA 93313	8
5	6B	5601 Outlets at Tejon Pkwy, Arvin, CA 93203	4
5	6B	5701 Dennis McCarthy Dr, Lebec, CA 93243	21
5	6B	9000 Countryside Ct, Lebec, CA 93243	4
5	6B	34.823730, -118.880460 (Lebec)	60
5	6B	201 Frazier Mountain Park Rd, Lebec, CA 93243	8
5	6B	73 Frazier Mountain Park Rd, Lebec, CA 93243	8
5	6B	31880 Castaic Rd, Castaic, CA 91384	8

Interstate or State Route	Corridor Group	Station Address or Coordinates	Number of Ports
5	6B	27923 Sloan Canyon Rd, Castaic, CA 91384	8
5	6B	24160 Lyons Ave, Newhall, CA 91321	8
58	7	20681 Tracy Ave, Buttonwillow, CA 93206	4
58	7	20688 Tracy Ave, Buttonwillow, CA 93206	4
58	7	4310 California Ave, Bakersfield, CA 93309	4
58	7	1631 S. Comanche Dr, Bakersfield, CA 93307	6
58	7	1001 W Tehachapi Blvd, Tehachapi, CA 93561	8
58	7	2000 E Tehachapi Blvd, Tehachapi, CA 93561	4
58	7	35.00993785886764, -117.8710390943351	4
58	7	27201 Boron Frontage Rd N, Boron, CA 93516	4
58	7	34.996484, -117.543025	4
58	7	2974 Lenwood Rd, Barstow, CA 92311	4
15	7	11490 Fashion Ct, Hesperia, CA 92345	8
15	7	14921 Bear Valley Rd, Hesperia, CA 92345	4
15	7	14799 Bear Valley Rd, Hesperia, CA 92345	4
15	7	34.590950, -117.257432	6
15	7	15680 Roy Rogers Dr, Victorville, CA 92394	4
15	7	2800 Lenwood Rd, Barstow, CA 92311	14
15	7	1308 E Main St, Barstow, CA 92311	4
15	7	36017 Calico Blvd, Yermo, CA 92398	16
15	7	39263 Harvard Rd, Newberry Springs, CA 92365	4
15	7	35.276504, -116.057843 (Baker)	12
15	7	65845 Cima Rd, Nipton, CA 92364	20
40	7	25635 Crucero Rd, Ludlow, CA 92338	4
40	7	68480 Ludlow Rd, Ludlow, CA 92338	4
40	7	2461 Needles Hwy, Needles, CA 92363	4
8	16	1155 Alpine Blvd, Alpine, CA 91901	4

Interstate or State Route	Corridor Group	Station Address or Coordinates	Number of Ports
8	16	1800 Golden Acorn Way, Campo, CA 91906	15
8	16	1496 Carrizo Gorge Rd, Jacumba Hot Springs, CA 91934	4
15	16	2890 National Ave, San Diego, CA 92113	5
15	16	9225 Clairemont Mesa Blvd, San Diego, CA 92123	4
15	16	41000 California Oaks Rd, Murrieta, CA 92562	4
805	16	930 Dennerly Rd, San Diego, CA 92154	4
210	19	12980 Foothill Blvd, Sylmar, CA 91342	4
215	19	40375 Murrieta Hot Springs Rd, Murrieta, CA 92563	4
215	19	454 North H Street, San Bernardino, CA 92410	4
405	19	10310 Sepulveda Blvd, Mission Hills, CA 91345	4
110	20	4403 S Figueroa St, Los Angeles, CA 90037	4
110	20	233 N Harbor Blvd, San Pedro, CA 90731	4
710	20	1201 S Fremont Ave, Alhambra, CA 91803	4
710	20	590 Long Beach Blvd, Long Beach, CA 90802	4
605	20	1114 Huntington Dr, Duarte, CA 91010	4
105	20	11037 Rosecrans Ave, Norwalk, CA 90650	4

Source: GFO-23-601

Figure 3: Station Locations in Northern California for Proposed Awards in Solicitation 1



Source: CEC staff

Figure 4: Station Locations in Southern California for Proposed Awards in Solicitation 1

Source: CEC staff

Scoring Methodologies Utilized

Table 7 summarizes the eight evaluation criteria developed for GFO-23-601 and the respective potential scores. (A detailed list of evaluation criteria is available at the California NEVI web page).²⁷ The highest value criteria included station design, project readiness, operations and maintenance plans, project team experience, and project costs. Staff used the Project Benefits criterion to evaluate applicants on the degree to

²⁷ California Energy Commission. "[National Electric Vehicle Infrastructure \(NEVI\) Formula Program](#)."

which they addressed environmental, economic, and health benefits of a project for priority populations and tribal nations.

To qualify as an eligible project, applicants needed to have at least 50 percent of the proposed chargers located within a disadvantaged or low-income community or both per the California definitions,²⁸ and at least 40 percent of the proposed chargers located within a Justice40 Community. Applicants also needed a minimum passing score of 70 percent (140 out of 200 possible points) to have an eligible project.

Table 7: Summary of GFO-23-601 Evaluation Criteria

Criterion	Description	Possible Points
1	Charging Station Design	50
2	Project Readiness	40
3	Operations and Maintenance	30
4	Team Qualifications and Experience	20
5	Expected Project Benefits	10
6	Innovation and Sustainability	10
7	Project Budget and Finances	20
8	Cost	20
Total Possible Points		200
Minimum Passing Score (70%)		140

Source: GFO-23-601 Application Manual

Plan for Compliance with Federal Requirements

The Solicitation 1 manual (GFO-23-601)²⁹ specified the federal requirements for which awardees will be responsible. Section II.B.1. of the Solicitation Manual, "Compliance with Requirements Applying to NEVI Projects," describes requirements to comply with the:

- Build America Buy American Act
- Davis Bacon Act
- National Environmental Policy Act
- Americans with Disabilities Act of 1990
- Title VI of the Civil Rights Act of 1964

²⁸ The following geographic areas are defined by the California Environmental Protection Agency as disadvantaged: (1) census tracts receiving the highest 25 percent of overall scores in CalEnviroScreen 4.0; (2) census tracts lacking overall scores in CalEnviroScreen 4.0 due to data gaps, but receiving the highest 5 percent of CalEnviroScreen 4.0 cumulative pollution burden scores; (3) census tracts identified in the 2017 disadvantaged community designation as disadvantaged, regardless of their scores in CalEnviroScreen 4.0; (4) and areas under the control of federally recognized tribes. California low-income communities are designated by CARB as census tracts with median household incomes at or below 80 percent of the statewide median income or with median household incomes at or below the threshold designated as low income by the California Department of Housing and Community Development

²⁹ California Energy Commission. (2023, December). ["Grant Funding Opportunity - California's National Electric Vehicle Infrastructure Formula Program - Addendum 1 \(GFO-23-601\)."](#)

- All applicable requirements of Title VIII of the Civil Rights Act of 1968
- Uniform Relocation Assistance and Real Property Acquisition Act (49 CFR 24 et seq.)

The manual also mandated compliance with federal NEVI program requirements, including:

- USC Title 23, Chapter 1
- 2 CFR part 200
- 23 CFR parts 35 and 36
- And any promulgated regulations for the federal NEVI program, and California's NEVI Deployment Plan, as amended

The CEC and Caltrans also developed Special Federal Award Terms and Conditions covering general and financial provisions.³⁰

The CEC is requesting proposals from expert consultants for assistance in complying with federal requirements. On July 8, 2024, the CEC released a request for proposal, RFP-24-301, "Compliance, Monitoring, and Reporting Support for Federal Funding."³¹ The selected contractor will review and improve future solicitation guidance and assist the state in monitoring compliance with several federal funding programs, including NEVI. Proposals were due August 19, 2024.

Civil Rights

No changes have been made from the 2023 NEVI Plan Update regarding the state's commitment to civil rights under the NEVI program.

Existing and Future Conditions Analysis

California Geography, Terrain, and Climate

No major changes have occurred to California's geography or terrain. Please see the 2022 NEVI Plan for a complete description.

A series of nine major winter storms known as "atmospheric rivers" pummeled California between January and March 2024, causing substantial flood damage and 21 fatalities in Southern California.³² The February storm alone led to nine deaths and caused an estimated \$11 billion in damages to roadways, infrastructure, the power grid, homes, and businesses. San Diego experienced an atmospheric river event in January, which

³⁰ California Energy Commission. (2023, October). "[GFO-23-601 Special Federal Terms and Conditions](#)."

³¹ California Energy Commission. (2024, July 8). "[RFP-24-301 – Compliance, Monitoring, and Reporting Support for Federal Funding](#)."

³² National Centers for Environmental Information. "[Annual 2023 National Climate Report](#)."

resulted in three deaths, damage to 800 homes, and a federal disaster declaration.³³ The storm also impacted priority populations in Monterey County.

In July 2023, California experienced a series of heat waves that produced record-setting temperatures around the state. At the time, July 2023 was the hottest month in global recorded history.³⁴ Despite the extreme summer temperatures, the 2023 fire season was relatively mild, with fewer than 325,000 acres burned, down substantially from the peak wildfire seasons between 2018 and 2021 when millions of acres burned.³⁵

The 2024 fire season has begun aggressively. Through August of this year, nearly 5,000 fire incidents have occurred, burning over 800,000 acres.

California ZEV Ownership and ZEV Market Conditions

California continues to make considerable progress toward its transportation electrification goals. More than 441,283 light-duty electric vehicles were sold in 2023,³⁶ or 25 percent of total sales and a 28 percent increase over 2022 sales. Cumulative light-duty ZEV sales now total nearly 2 million vehicles, and an estimated 1 million electric vehicles are now on the road. The state's goal of 1.5 million ZEV sales by 2025 was achieved two years ahead of schedule.³⁷

California continues to have the most dynamic ZEV market in the country, accounting for 40 percent of all ZEV sales nationally.³⁸ In the third quarter of 2023, ZEV sales reached a new high of 26.75 percent of all light-duty vehicle sales.³⁹ The Tesla Model 3, Model Y, and Model S were the top selling vehicles in their respective classes, outcompeting fossil-fueled counterparts. In 2023, Tesla was again the second-highest selling brand overall in California with 13 percent market share, up slightly from 11.2 percent in 2022. Toyota continued to be the state's highest-selling brand with 15.7 percent market share, while Ford is number three with 11.8 percent market share.⁴⁰

The Clean Vehicle Rebate Project now lists 19 eligible automakers with 105 ZEV models, up substantially from the 40 ZEV models available in 2022. Nine automakers offer 16 models of plug-in hybrid electric vehicles.⁴¹ After Tesla, the top selling ZEVs in California in 2023 include the Volkswagen ID.4, Chevrolet Bolt EUV, Mustang Mach-e,

³³ California Governor's Office of Emergency Services. (2024, February 20). "[Governor Newsom Secures Presidential Major Disaster Declaration to Support Storm Recovery Efforts in San Diego.](#)"

³⁴ Governor's Office of Emergency Services. (2023, August 2). "[Extreme Heat Breaking Records at Home and Beyond.](#)"

³⁵ California Department of Forestry and Fire Protection. "[Statistics](#)," accessed August 9, 2024.

³⁶ Veloz. (2024, April). "[California EV Market Report.](#)"

³⁷ Office of Governor Newsom. (2023, April 21). "[California Surpasses 1.5 Million ZEVs Goal Two Years Ahead of Schedule.](#)"

³⁸ Office of Governor Newsom. (2023, January 20). "[California ZEV Sales Near 19% of all New Car Sales in California in 2022.](#)"

³⁹ California Energy Commission. "[New ZEV Sales in California.](#)"

⁴⁰ California New Car Dealership Association. (2024, January 29). "[California New Car Dealers Association Releases Year-End 2023 Auto Outlook Report.](#)"

⁴¹ California Clean Vehicle Rebate Project. (2024, May 30). "[List of Eligible Vehicles.](#)"

Hyundai IONIQ 5, and BMW i4. Rivian's sales of the R1S and R1T surpassed 10,000 vehicles for the first time, and the Ford F-150 Lightning sales exceeded 4,000 vehicles.⁴²

On California's Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project website, 30 original equipment manufacturers now have eligible zero-emission trucks in the medium-duty package delivery, heavy-duty straight truck, and Class 7 and 8 tractor categories.⁴³

In terms of manufacturing, "California is home to more than 360 companies with 70,000 employees that work on zero-emission transportation, including vehicles, components, infrastructure, and research. California has 56 ZEV-related manufacturers and leads the nation in ZEV manufacturing jobs. Transportation equipment manufacturing was the fourth-largest export in California by trade dollar value in 2022."⁴⁴

Freight

Given the significant impacts to public health of diesel trucks and the immense need for infrastructure to support the adoption of zero-emission medium- and heavy-duty trucks, California intends to use NEVI funding for projects along AFCs that support charging of battery-electric trucks. Use of NEVI funds for this purpose builds on direction in California's previous annual NEVI plans, aligns with state and federal policies described below, and reflects input from community groups and the private sectors.

California's Goods Movement Sector

California boasts a state-of-the-art freight transportation network, renowned for its diverse modal options that ensure the prompt and effective delivery of essential goods. Ongoing enhancements aimed at bolstering efficiency and reducing emissions will further benefit the state's economy and the welfare of its residents.

California has 12 seaports, 12 airports with major cargo operations, two Class I railroads, 27 Class III railroads, three existing and one future commercial land border ports of entry with Mexico, more than 3,500 National Highway Freight Network miles, and a large warehousing and distribution sector.⁴⁵ Phase 1 and 2 of the National Zero-Emissions Freight Corridor Strategy, shown in Figure 5, encompass four principal ports in California, many miles of the National Highway Freight Network, and select intermodal freight facilities.⁴⁶

The highway network is the largest component of California's freight network in terms of infrastructure, tonnage shipped, and value shipped. It provides first- and last-mile

⁴² California Energy Commission. "[New ZEV Sales in California](#)."

⁴³ California Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project. "[List of Eligible Vehicles Sorted for Medium-Duty, Straight Truck, and Tractor Categories](#)," accessed May 29, 2024.

⁴⁴ Tuggy, Benjamin. (2024). [2024-2025 Investment Plan Update for the Clean Transportation Program](#), California Energy Commission. Publication Number: CEC-600-2024-047-SD.

⁴⁵ California Department of Transportation. (2023). [California Freight Mobility Plan 2023](#).

⁴⁶ Joint Office of Energy and Transportation. (2024). [National Zero-Emission Freight Corridor Strategy 2024](#).

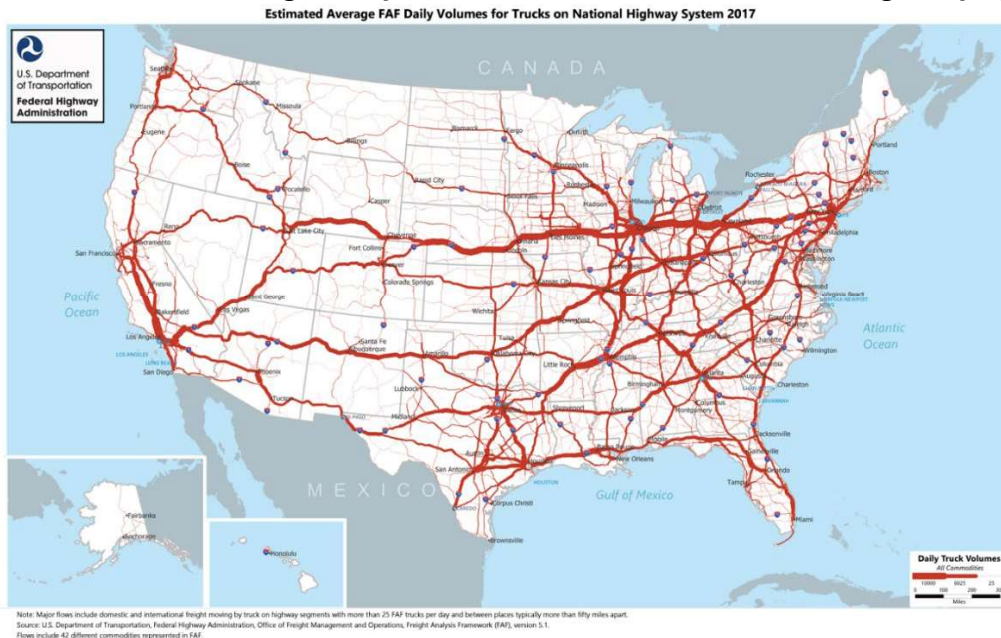
connections to other modes in addition to supporting California's key industries. Trucks are by far the most used mode (between air, rail, marine, and pipelines) to move freight. The Freight Analysis Framework forecasts that freight moved on trucks is expected to grow by 47 percent from 2023 to 2050 in California.⁴⁷ Figure 6 shows daily truck volumes in California compared to the rest of the nation.

Figure 5: Phases 1 and 2 of the National ZEF Network



Source: Joint Office of Energy and Transportation

Figure 6: Estimated Average Daily Volumes for Trucks on National Highway System⁴⁸














Source: U.S. Department of Transportation

⁴⁷ Oak Ridge National Laboratory. "[Freight Analysis Framework Version 5.](#)"

⁴⁸ Federal Highway Administration. "[Estimated Average FAF Daily Volumes for Trucks on National Highway System 2017.](#)"

Figures 7 and 8 illustrate the state's priority Clean Freight Corridors based on a report published by the CTC in December 2023.⁴⁹ The assessment identified California's corridors with the highest average daily truck volumes, commodities, and emissions.

Figure 7: Truck Traffic Assessment of California Corridors⁵⁰

	Median traffic count (trips/day)	Mean traffic count (trips/day)	Max traffic count (trips/day)	Vehicle miles travelled (Millions, daily)	Estimated corridor length (miles)
 10	2,589	2,782	7,162	1.2	242
 40	2,335	2,328	2,385	0.7	155
 5	2,142	2,425	6,647	4.5	797
 99	2,138	1,997	3,491	1.3	334
 15	1,733	2,284	5,647	1.6	288
 80	1,447	1,633	3,727	0.7	204
...					
 710	1,891	2,092	4,870	0.1	23
 210	1,679	1,874	4,029	0.2	173
 60	1,666	1,925	6,108	0.3	170
 58	1,046	988	2,450	0.3	286
 101	397	563	4,324	0.7	673

Source: California Transportation Commission

Figure 8: "Top 6" Freight Corridors Identified⁵¹

Priority corridors identified

Ordered by truck volume – 2022 projected

-  I-5 from California's Southern border with Mexico to its Northern border with Oregon
-  I-15 from San Diego to California's Southeast border with Nevada
-  Route 99 from Red Bluff to Bakersfield
-  I-10/I-710 from the San Pedro Bay Ports to Los Angeles to California's Southeast border with Arizona
-  I-40 from its intersection with I-15 to California's Southeast border with Arizona
-  I-80/I-580 and I-880 from the Port of Oakland to San Francisco to California's northeast border with Nevada



Source: California Transportation Commission

⁴⁹ California Transportation Commission. (2023). [SB 671 Clean Freight Corridor Efficiency Assessment](#).

⁵⁰ *Ibid.*

⁵¹ *Ibid.*

Policies Support the Transition to Zero-Emission Trucks

Adoption of zero-emission trucks and buses in California is directly related to world-leading policies set by CARB that are beginning to take effect. Such policies require the sale and purchase of ZEVs and include the Innovative Clean Transit, Advanced Clean Trucks, and Advanced Clean Fleets standards, which began taking effect in 2023 and 2024.

The Innovative Clean Transit standard requires 25 percent of bus purchases by large transit agencies to be zero-emission in 2023 and increases to 50 percent for these agencies in 2026 and 100 percent in 2029. Purchase requirements for small agencies begin in 2026 at 25 percent and increase to 100 percent in 2029.⁵²

The Advanced Clean Trucks standard sets ZEV sales targets for manufacturers of Class 2b–8 vehicles. Policy implementation began with Model Year 2024, requiring 5 to 9 percent of medium- and heavy-duty vehicle sales to be of ZEVs, depending on the weight class. This requirement increases to 40 to 75 percent of sales by Model Year 2035. Manufacturers are on track to more than double the number of zero-emission Classes 7–8 tractor sales required by the standard for Model Year 2024.⁵³

In 2023, Caltrans published its latest federally approved California Freight Mobility Plan (CFMP). The CFMP is a comprehensive plan that governs the immediate and long-range planning activities and capital investments by the state with respect to freight movement. The CFMP includes strategies to support infrastructure for zero-emission medium- and heavy-duty vehicles.

State Funding for Medium- and Heavy-Duty ZEV Infrastructure

Funding programs at the CEC and Caltrans are helping build infrastructure for zero-emission trucks:

- In the most recently adopted Investment Plan for the Clean Transportation Program (CTP), the CEC will allocate \$685.2 million in funding for medium- and heavy-duty vehicle infrastructure in Fiscal Years 2023–2024 through 2027–2028.⁵⁴
- In 2023, the CEC's CTP awarded \$88 million for truck charging across three solicitations: CALifornia Provided Along Targeted Highway Segments, MDHD Blueprint Implementation, and Innovative Charging Solutions for the MDHD Sector. These awards will fund 13 projects across 19 sites for a total of nearly 450 charging ports.
- The CTP Energy Infrastructure Incentives for Zero-Emission block grant funding program, which focuses on medium- and heavy-duty vehicle infrastructure, has awarded \$118.3 million for 212 projects and 2,005 charging ports.

⁵² California Air Resources Board. (2019, May 16). "[Innovative Clean Transit Regulation Fact Sheet](#)."

⁵³ California Air Resources Board. (2021, August 20). "[Advanced Clean Trucks Fact Sheet](#)."

⁵⁴ Tuggy, Benjamin. (2024). [2024-2025 Investment Plan Update for the Clean Transportation Program](#), California Energy Commission. Publication Number: CEC-600-2024-047-SD.

- In June 2023, Caltrans was awarded funding for three truck-charging and hydrogen-fueling projects totaling \$111.6 million under Cycle 3 of the state's Trade Corridor Enhancement Program.⁵⁵
- Caltrans is also administering the state's Port and Freight Infrastructure Program on behalf of CalSTA, including significant ZEV-related projects such as the \$76.3 million Freight Air Quality Solutions project that will provide truck charging at warehouses in Southern California.⁵⁶

Federal Funds Are Needed to Support Truck Electrification in California

Despite the significant investments in state funding for truck electrification, federal funding, including NEVI, is needed to enable California's transition to zero-emission medium- and heavy-duty vehicles. The CTC's Clean Freight Corridor Efficiency Assessment estimates the total capital cost to build the initial infrastructure network supporting zero-emission trucks to be between \$10 billion and \$15 billion.

In June 2023, Caltrans, the CEC, Oregon Department of Transportation, and Washington State Department of Transportation applied to the USDOT's Charging and Fueling Infrastructure (CFI) Discretionary Grant Program to support charging and hydrogen fueling infrastructure for trucks from Mexico to Canada along Interstate 5 and key corridors connecting to ports and freight centers along the West Coast. On August 27, 2024, this tristate project was awarded \$102 million in funding, a key milestone in achieving zero-emissions goods movement along the West Coast and nationally.

As described in the Plan Vision and Goals section, an estimated 5,500 high power en route chargers and 109,000 low power chargers are needed to support 155,000 zero-emission trucks in California by 2030. This demand far exceeds existing funding; thus, the three states are also preparing an application to support truck charging along Interstate 5 for the second round of CFI funding. The California NEVI Agencies are also working with ports across the state to develop an application that supports drayage truck charging.

Incorporation of Truck Charging in NEVI Solicitations 1 and 2

Recognizing that NEVI Formula Program funds can be used to install, operate, and maintain EV charging stations for medium- and heavy-duty vehicles,⁵⁷ California's first NEVI solicitation included evaluation criteria to encourage truck charging. The goal was to reward projects supporting use by multiple vehicle-types, having higher-powered

⁵⁵ California Transportation Commission. (2022, November 18). "[Trade Corridor Enhancement Program – Application Receipt Log](#)."

⁵⁶ California State Transportation Agency. (2023). [Port and Freight Infrastructure Program \(PFIP\) Annual Report](#).

⁵⁷ Federal Highway Administration. "[NEVI Formula Program Questions and Answers](#)," accessed August 1, 2024.

charging than the minimum requirement, and offering pull-through⁵⁸ charging configurations. In the state's first NEVI solicitation, no projects included attributes to specifically support medium- and heavy-duty vehicles. Similar criteria will be included in California's second NEVI solicitation.

Incorporation of Truck Charging in Future Solicitations

California plans to include more extensive support for truck charging projects in NEVI Solicitation 3 and beyond. The state's goal is to fund chargers dedicated to trucks, much like existing travel centers that have separate fueling for passenger vehicles and heavy trucks, to minimize safety risks associated with pedestrian and truck interactions and provide infrastructure that best serves the needs of different vehicles. These solicitations will adhere to the 23 CFR Section 680 standards for NEVI-funded charging stations.⁵⁹

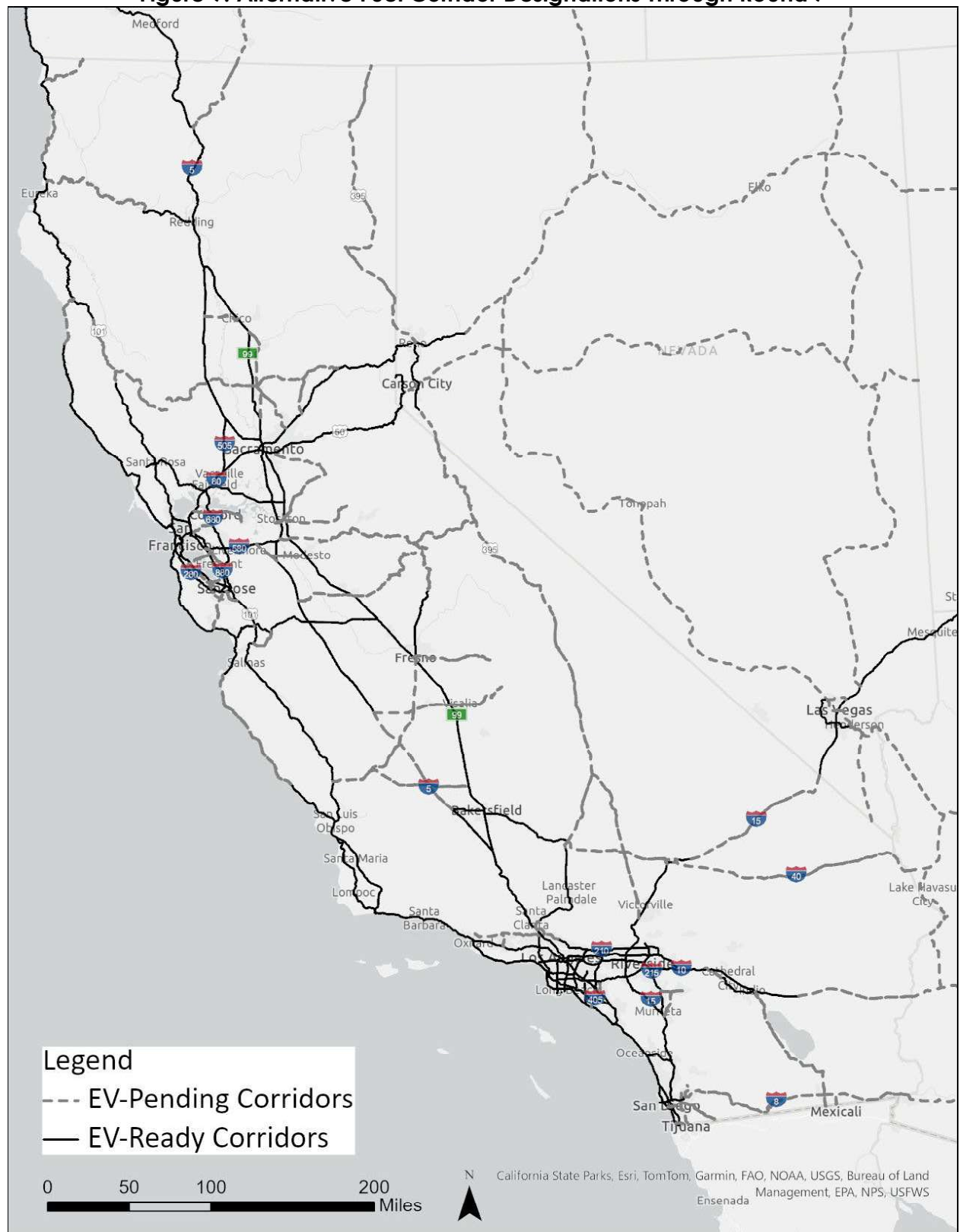
Alternative Fuel Corridor Designations

Figure 9 shows California's designated AFCs through Round 7 in 2023. The AFCs now encompass nearly all the state's major north-south and east-west freeway and highway corridors, more than 7,000 center-line miles. On August 1, 2024, Caltrans submitted nominations to Round 8 of the AFC program. Corridors approved by the FHWA in Round 8 will be described in the 2025 NEVI Plan Update.

⁵⁸ Pull-through charging stalls benefit not only heavy-duty trucks but also charging for tow vehicles, towed recreation equipment (for example, electrified RV trailers, boats, motorcycles), or construction equipment (for example, skid steers, mini excavators).

⁵⁹ Code of Federal Regulations. "[National Electric Vehicle Infrastructure Standards and Requirements](#)."

Figure 9: Alternative Fuel Corridor Designations Through Round 7



Source: CEC staff

Existing Charging Stations

Figures 10, 11, and 12 show existing public DC fast charging and Level 2 charging stations in California as of June 28, 2024, based on information from the U.S. Department of Energy's Alternative Fuels Data Center (AFDC). These maps show 2,383 DC fast charging stations in California, up from 1,900 in the 2023 NEVI Plan Update. Similarly, more than 15,500 public Level 2 stations are now available in the state, up from 14,100 in the 2023 NEVI Plan Update.⁶⁰ A complete table of existing DCFCs and Level 2 chargers along the current AFCs in California can be downloaded from the AFDC website.

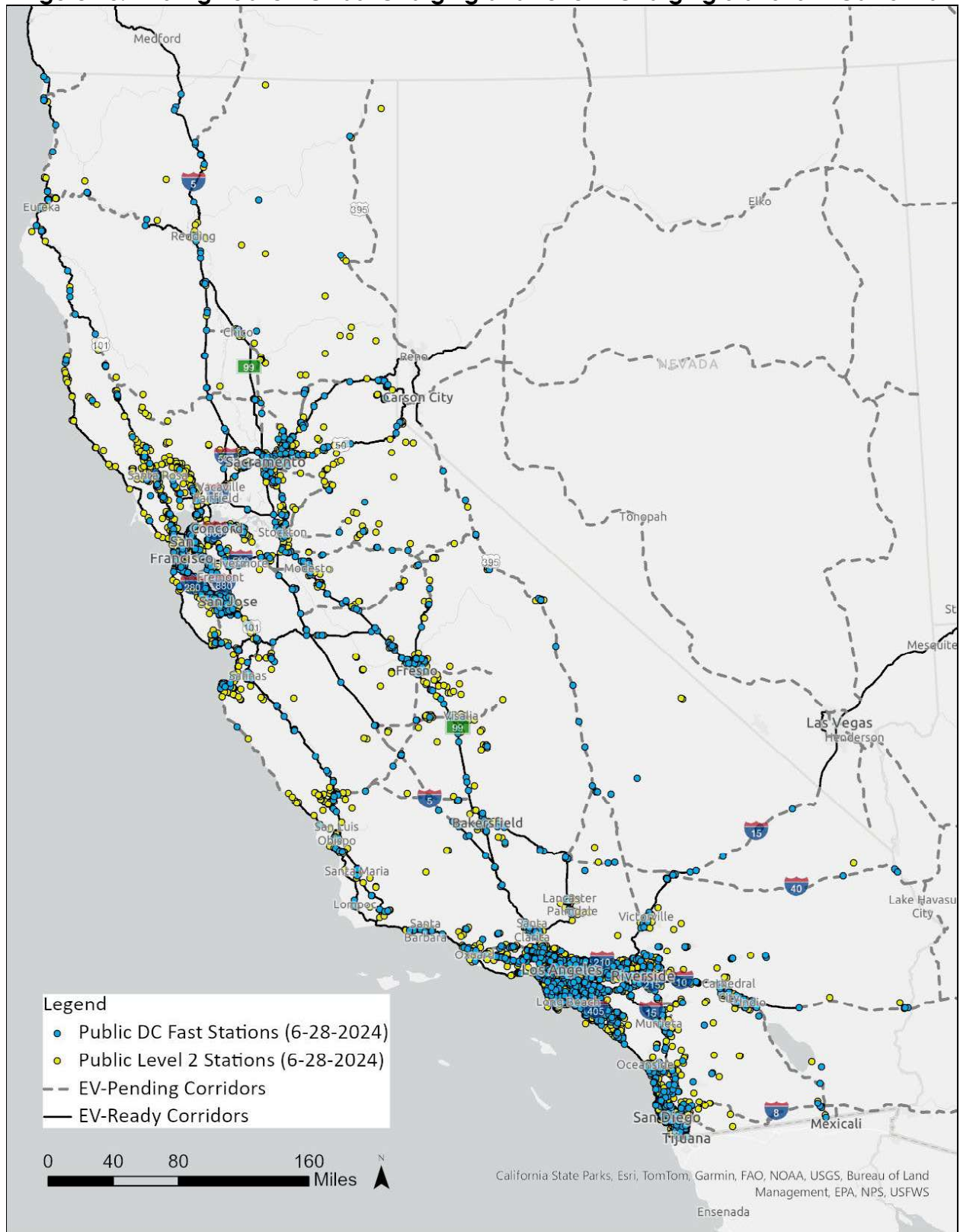
EV Charging Infrastructure Deployment

There are now 14,708 public and shared private DC fast chargers in California according to analysis by the CEC as of August 2024 (13,943 of the DC fast chargers are public and 765 are shared private).⁶¹

⁶⁰ U.S. Department of Energy. "[Alternative Fuels Data Center](#)," accessed June 28, 2024.

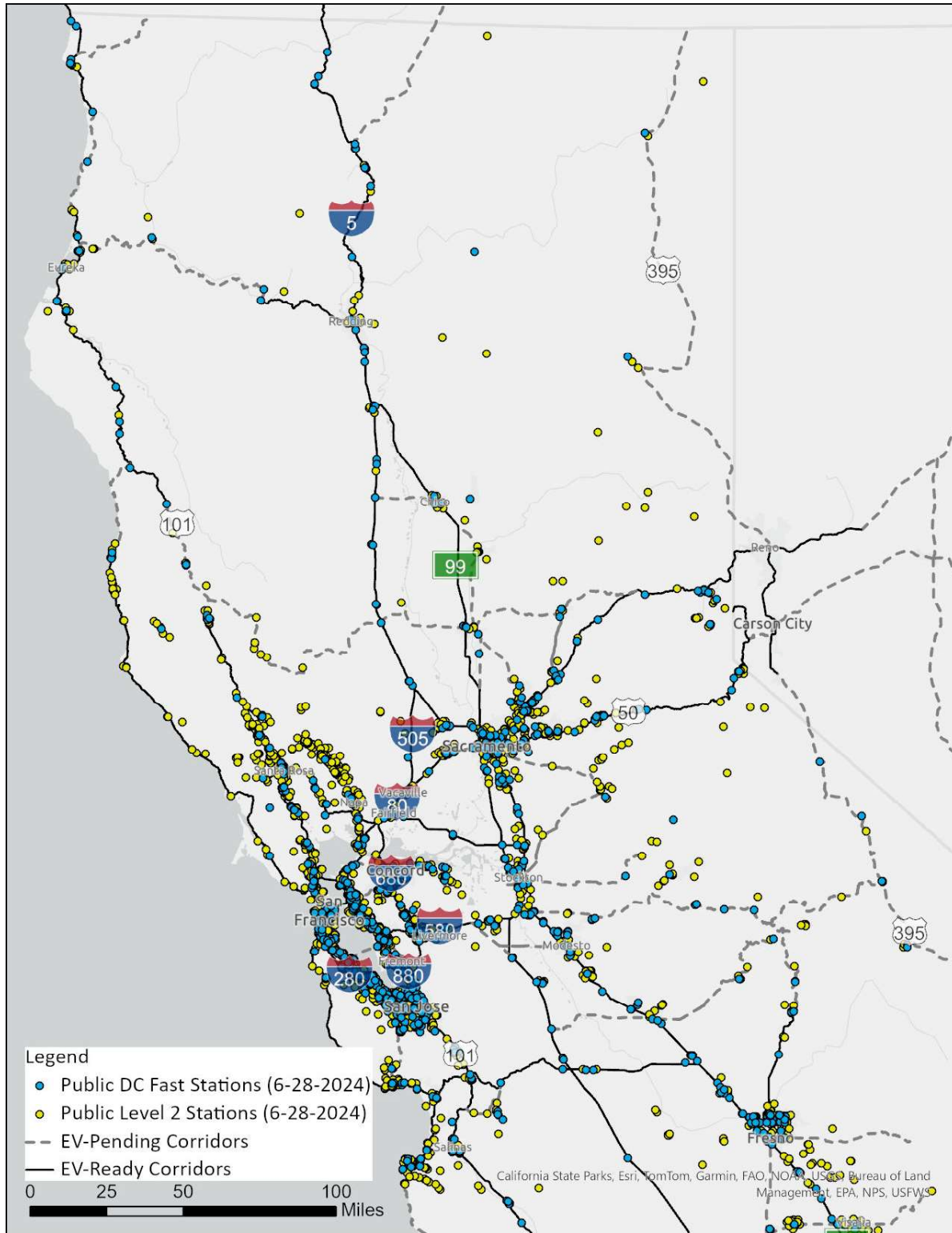
⁶¹ These numbers reflect the CEC's latest count as of August 29, 2024 and are greater than the 12,105 public and 205 private DC fast chargers, respectively, in California captured by the AFDC as of August 30, 2024.

California Energy Commission. "[Electric Vehicle Chargers in California](#)," accessed August 29, 2024.

Figure 10: Existing Public DC Fast Charging and Level 2 Charging Stations in California

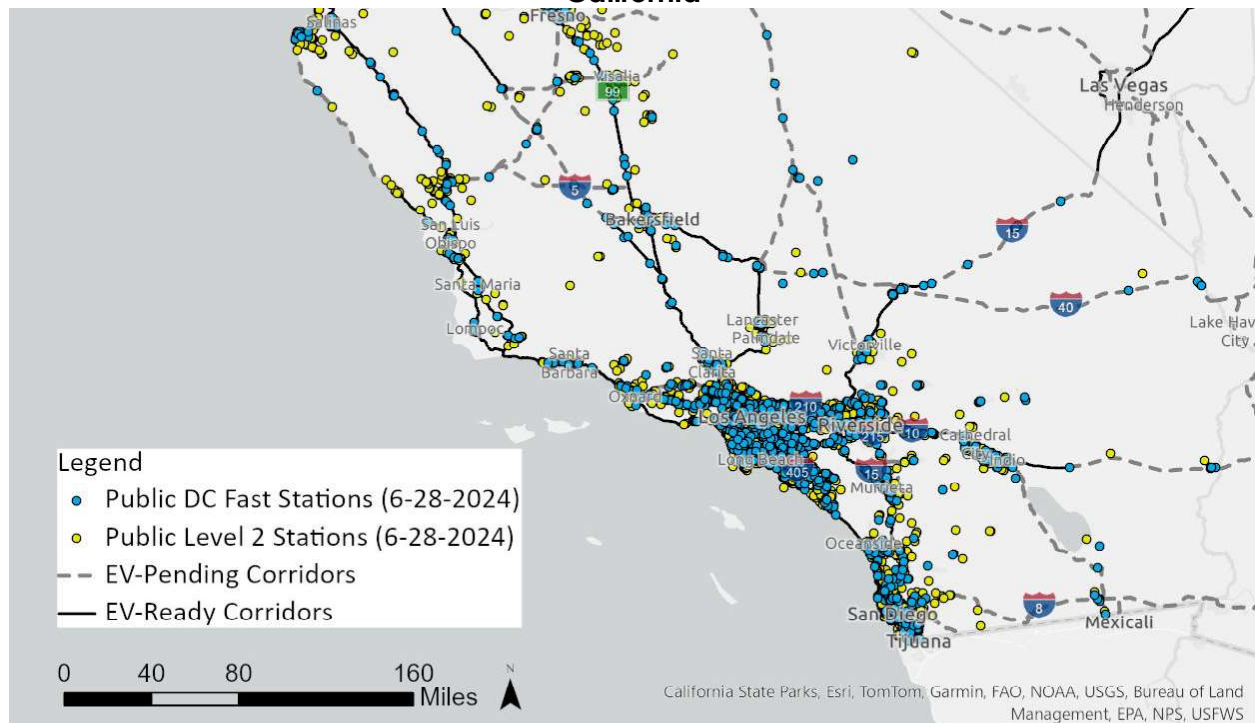
Source: CEC staff using AFDC data as of June 28, 2024

Figure 11: Existing Public DC Fast Charging and Level 2 Charging Stations in Northern California



Source: CEC staff using AFDC data as of June 28, 2024

Figure 12: Existing Public DC Fast Charging and Level 2 Charging Stations in Southern California



Source: CEC staff using AFDC data as of June 28, 2024

Nonfederal Funding for Charging Infrastructure

Looking forward, California will invest \$42.6 million in light-duty charging infrastructure through the CEC's CTP in 2023–2024 and an additional \$340 million in Greenhouse Gas Reduction Funds through Fiscal Year 2026–2027.

The CPUC's investments in light-duty charging infrastructure through its Transportation Electrification program totals \$1.1 billion; nearly \$300 million has been spent to date with more than \$800 million remaining to be invested.⁶²

The private sector continues to invest heavily in charging infrastructure as well. The CEC's standard match requirement is 50 percent cost share. To date, the CTP has leveraged \$1.1 billion in private funding.⁶³ Private match for the 70 charging stations proposed for awards under NEVI Solicitation 1 totals \$53.2 million.⁶⁴

⁶² California Public Utilities Commission. "[Charging Infrastructure Deployment and Incentives](#)," accessed August 29, 2024.

⁶³ Tuggy, Benjamin. (2024). [2024-2025 Investment Plan Update for the Clean Transportation Program](#), California Energy Commission. Publication Number: CEC-600-2024-047-SD.

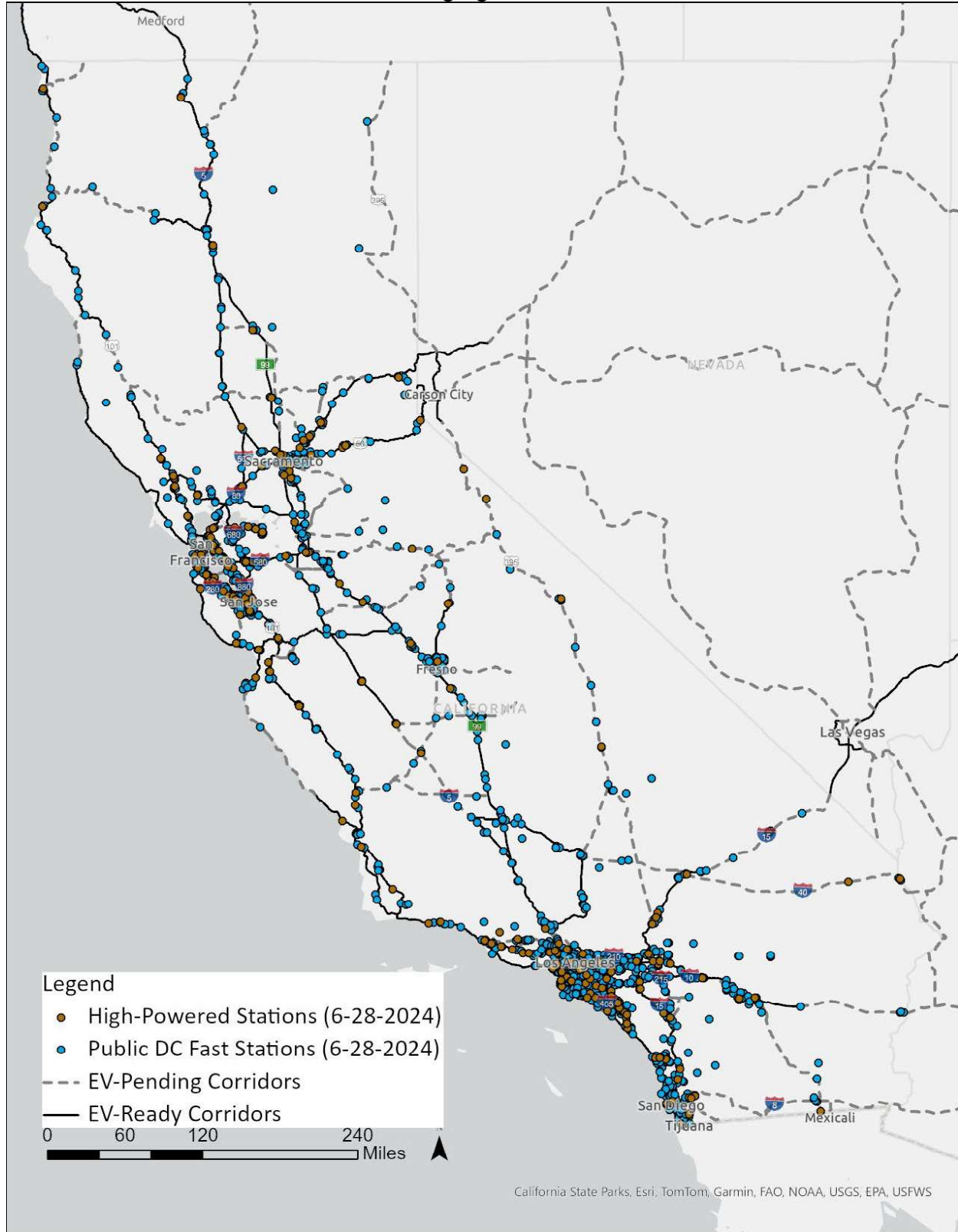
⁶⁴ California Energy Commission. (2024, June 3). "[GFO-23-601 Notice of Proposed Awards](#)."

Existing High-Powered EV Charging Stations

Figure 13 shows locations of DC fast charging stations in California. These stations include high-powered, public stations that meet the power and spatial requirements of 23 CFR Section 680: a minimum of 4 x 150 kW ports with CCS connectors at stations located no more than 1 mile from an AFC, and no more than 50 miles apart. There are 213 existing stations that meet these criteria. DC fast charging stations that do not meet the power requirements of 23 CFR Section 680 are labeled as “Public DC Fast Stations” in Figure 13.

The CEC and Caltrans cannot determine the number of existing DC fast charging stations installed before the establishment of the NEVI program that meets all of the 23 CFR Section 680 requirements because the reporting requirements for these stations do not capture all of the metrics needed to verify compliance. Looking forward, the CEC and Caltrans will identify stations that are fully NEVI-compliant as stations funded through the NEVI program become operational.

Figure 13: Existing High-Powered DC Fast Charging Stations and Non-NEVI DC Fast Charging Stations



Source: CEC staff using AFDC data as of June 28, 2024

Planned Charging Stations

The announced awards for NEVI Solicitation 1 are expected to yield 70 stations and 504 charging ports, most of which are 200 kW. Planning for Solicitation 2 is underway, and the \$100 million round of funding is expected to support 120 charging stations and nearly 600 charging ports. The EVC RAA award of \$63.7 million is expected to fund an additional 1,302 NEVI-compliant ports in California.

Planning Towards a Fully Built-Out Determination

Assuming minimal expansion of the current 7,000-mile AFC network, California will have at least 2,400 ports across more than 190 stations that will be fully NEVI-compliant when Solicitations 1 and 2 and the EVC RAA upgrades are completed.

Grant agreements for the 70 stations awarded for Solicitation 1 are expected to receive federal funding authorization from the FHWA and to be executed by CEC in fall 2024. Projects can proceed once federal authorization is received and an agreement is executed. Stations must become operational within five years from the date of award, although some are expected within one to two years. Solicitation 2 should result in awards in 2025, with the same five-year maximum time to make stations operational.

California conservatively estimates that it will achieve fully built-out status in 2030, roughly five years after executing agreements from Solicitations 1 and 2 (Table 8). The exact number of stations needed to achieve fully built-out status is subject to change, given that EVC RAA should bring some existing stations along AFCs into NEVI compliance.

Table 8: Estimated Number of Stations and Time Estimate to Achieve Fully Built-Out Status

Guidance Question	California Response
<i>How many stations are still needed to achieve Fully built-out status (based on the state's EV AFCs as of the date of this update's submission)?</i>	190
Provide the estimated year to achieve Fully built-out status:	2030

Source: CEC staff based on 2024 NEVI Plan Template

EV Charging Infrastructure Deployment After Build-Out

As discussed in the Vision section, after deployment of the Solicitation 2 funds, Caltrans and the CEC plan to direct a large portion of the remaining \$230 million in NEVI formula funds to truck charging stations for medium- and heavy-duty vehicles. When the build-out of the AFCs is complete, the NEVI Agencies may continue supporting additional truck charging or community charging outside the AFC network.

Implementation

The CEC has taken rigorous steps to support the reliable operation and maintenance of charging infrastructure funds provided through the CTP, including those funded through the NEVI Formula Program. Current and future CEC solicitations for charging infrastructure will include:

1. Minimum reliability standards
2. Detailed recordkeeping and reporting requirements
3. Requirements for annual preventive maintenance
4. Maximum times to conduct corrective maintenance

The CEC is taking additional steps to better understand and ensure the reliability of charging infrastructure operating in California. The CEC has recently approved a contract for a third party to field test publicly accessible chargers by sending testers to charging stations to attempt to charge a variety of EV makes and models.

Please see the Plan Vision and Goals section for a full description of the measures the California NEVI Agencies will use to ensure that the NEVI-funded stations are operated and maintained in conformance with federal requirements, including accountability by station owners and operators. As noted, planning, installation, maintenance, and ownership of the NEVI-funded stations is the responsibility of the grant recipient. These obligations are part of the legally binding agreements each awardee must agree to in accepting a NEVI-funding award.

Please see the Labor and Workforce Considerations section for a full description of the measures California will use to ensure conformance with NEVI's labor, training, and installation standards.

Please see the Compliance section for a full description of AB 2061, which requires the CEC to develop uptime recordkeeping and reporting requirements for all chargers installed with a state incentive on or after January 1, 2024. Following AB 2061, the CEC has released draft regulatory language.

California's Electric Grid

California is undertaking grid and transmission planning to account for increasing electrification of the building and transportation sectors, with an eye toward policies that will encourage grid-friendly load growth. New electric load from ZEVs has steadily increased in recent years and will increase over the coming decades but is expected to add only a small amount of electricity demand to California's grid over the next decade.

The CPUC is working to support and direct California investor-owned utilities to keep pace with the growing number of new EV charging stations planned and being developed in California. CPUC Resolution E-5247, issued in December 2022, sets a 125-

day target for site interconnection energizations under 2 MW.⁶⁵ CPUC staff has started a similar proceeding to promote transportation electrification in the truck sector.⁶⁶

California's Electric Utilities

California has more than 80 electric utilities, including investor-owned utilities, public utilities, community choice aggregators, and rural electric co-ops.⁶⁷ These utilities vary widely in size and service territories. The six private utilities include three large investor-owned utilities (Pacific Gas and Electric, Southern California Edison, and San Diego Gas & Electric) and several community-sized companies like Bear Valley Electric Service. The 45 public utilities also vary in size, ranging from the large Los Angeles Department of Water and Power and the Sacramento Municipal Utility District to scores of small, community-based utilities. There are 25 community choice aggregators and four rural electric cooperatives.

Slow energization times and grid capacity constraints can slow development of DC fast charging stations. In response, CEC staff is developing a potential new modeling approach with the EVSE Deployment and Grid Evaluation modeling tool.⁶⁸ This tool is intended to identify areas in the state that have sufficient grid capacity to accommodate new charger station-related load or that are grid-constrained or will be in the near future (through 2025). A description of the analytical approach to identifying grid-constrained parts of the state is available in the CEC's Second AB 2127 Report.⁶⁹

Equity Considerations for Priority Populations

Identification and Outreach to Disadvantaged Communities in the State

Figure 14 shows the locations of AFCs and priority populations through Round 7 for California. CEC staff accessed the Climate and Economic Justice Screening Tool to identify the 3,801 census tracts meeting the Justice40 criteria.⁷⁰ A total of 2,940 census tracts are identified with Climate and Economic Justice Screening Tool that meet the priority population definition.

⁶⁵ California Public Utilities Commission. "[Distribution Infrastructure and Planning to Support EV Charging](#)."

⁶⁶ California Public Utilities Commission. "[Freight Infrastructure Planning](#)."

⁶⁷ California Energy Commission. "[Electric Load-Serving Entities in California](#)."

⁶⁸ California Energy Commission. "[EVSE Deployment and Grid Evaluation Tool](#)."

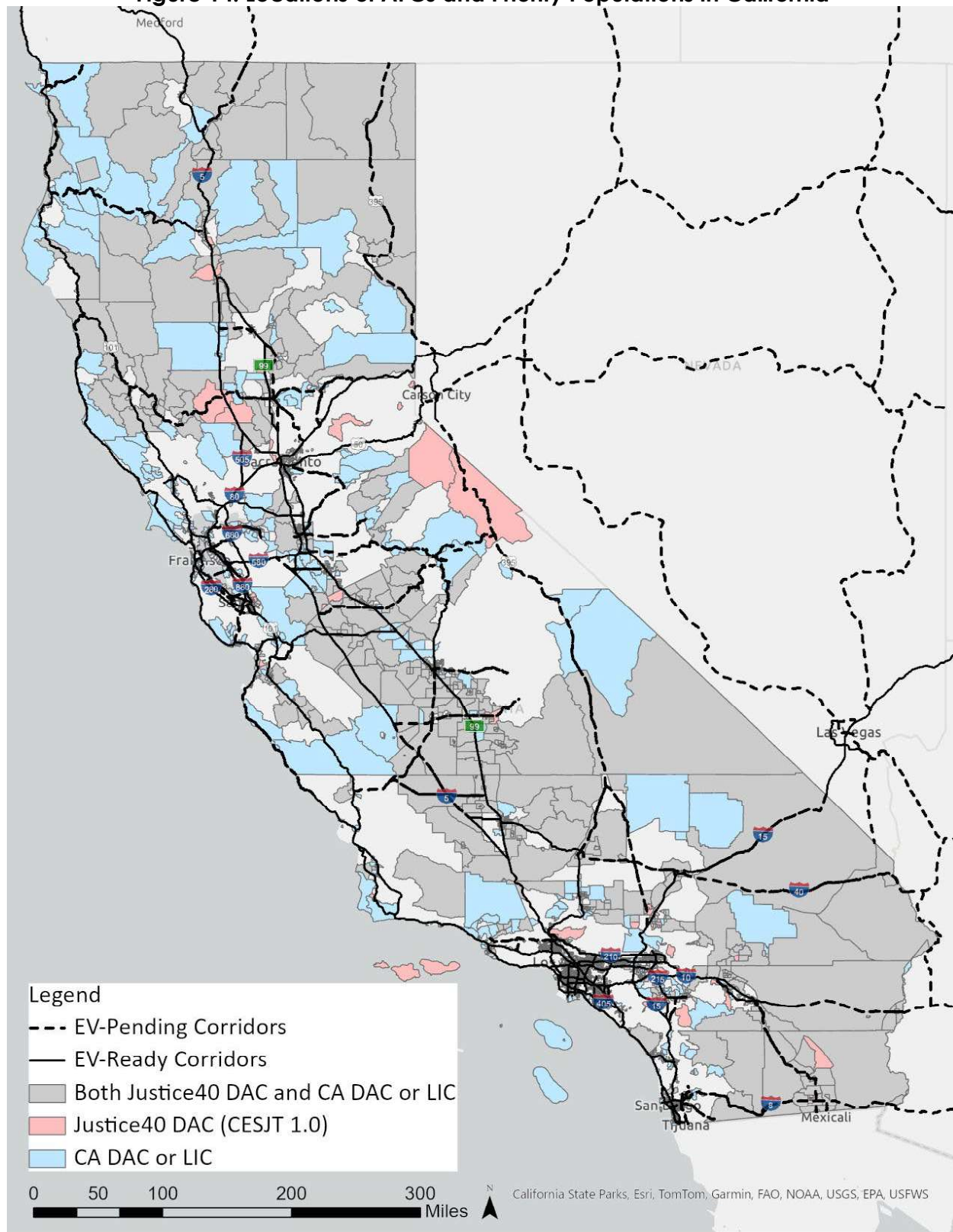
⁶⁹ Davis, Adam, Tiffany Hoang, Thanh Lopez, Jeffrey Lu, Taylor Nguyen, Bob Nolty, Larry Rillera, Dustin Schell, and Micah Wofford. (2023). [Assembly Bill 2127 Second Electric Vehicle Charging Infrastructure Assessment: Assessing Charging Needs to Support Zero-Emission Vehicles in 2030 and 2035](#). California Energy Commission. Publication Number: CEC600-2024-003-CMR.

⁷⁰ U.S. Council on Environmental Quality. (2022, November 22). "[Climate and Economic Justice Screening Tool 1.0](#)."

Caltrans and the CEC will continue to use the NEVI program to bring benefits to both Justice40 communities and California-designated disadvantaged and low-income communities. These groups are referred to collectively in this document as priority populations and are defined as follows:

- Justice40 communities are designated by U.S. Department of Transportation and U.S. Department of Energy as communities that experience health, transportation access, and energy burdens, with economies highly dependent on fossil energy sources and exposure to environmental and climate hazards. These communities include federally recognized tribal nations and U.S. territories.
- California disadvantaged communities are designated by the California Environmental Protection Agency as communities that experience the highest pollution burden and are especially vulnerable to the effects of pollution.
- California low-income communities are designated by CARB as census tracts with median household incomes at or below 80 percent of the statewide median income or with median household incomes at or below the threshold designated as low income by the California Department of Housing and Community Development.

Please see the Public Engagement section for information on outreach to priority populations.

Figure 14: Locations of AFCs and Priority Populations in California

Source: CEC staff using the Climate and Economic Justice Screening Tool 1.0

Process to Identify, Quantify, and Measure Benefits to Priority Populations

With the announcement of proposed awards for Solicitation 1 on June 3, 2024,⁷¹ California's NEVI Agencies can begin to estimate equity benefits for Corridors 6A, 6B, 7, 16, 19, and 20. These corridors represent some of the most heavily traveled freeway and highway segments in the state, including Interstates 5, 8, 10, 15, 40, 405, and 710. Data for the benefit metrics were taken from the application information from the 11 winning awards, which total 70 stations and 504 charging ports. These are the best available data to date; the final benefit metrics can be derived from station operators when stations become operational.

Results are reported in Table 9 in five-year increments unless otherwise noted. This period corresponds with NEVI's five-year maintenance requirement. Some benefit metrics cannot be reported until the projects become operational, such as Benefit Category 6 for the amount of funding for clean energy jobs and job training.

Table 9: Equity Benefits from Solicitation 1 Measured in Five-Year Increments

Benefit No.	Benefit Category	Metric	5-Year Total
1	Improve transportation access through charger locations	No. of NEVI-compliant ports in priority populations	426 of 504 ports
2	Decrease transportation energy cost burden	Average dollars saved in fuel and maintenance costs	\$294,192,865
2	Decrease transportation energy cost burden	Gallons of displaced fossil fuels	62,534,163
3	Reduce transportation emissions	Total number tons of CO ₂ reduced over five years	576,449
3	Reduce transportation emissions	Grams of CO ₂ reduced per dollar of NEVI investment	210,946
3	Reduce transportation emissions	5-year reductions in PM _{2.5}	2,497,804
3	Reduce transportation emissions	5-year reductions in reactive organic gases	235,587,150
3	Reduce transportation emissions	5-year reductions in NO _x	43,435,248
4	Increase parity in clean transportation access	Percentage of NEVI-compliant chargers in priority populations	83%
5	Increase access to low-cost capital	Dollars spent on capital and percentage of revenues spent on businesses in priority populations	\$31,309,704
6	Increase clean energy jobs and training	Total training dollars spent in priority populations	\$18,785,822

⁷¹ California Energy Commission. (2024, June 3). "[GFO-23-601 Notice of Proposed Awards](#)."

6	Increase clean energy jobs and training	Total no. of apprentices and dollars spent on trainings and apprenticeships	Data not yet available
6	Increase clean energy jobs and training	Total no. of jobs created and percentage of hires from priority populations	157 (83%)
7	Charging for ride shares	No. of companies engaged	No data available on TNC use of NEVI chargers.
8	Increase equitable access to the grid	Dollars spent to electrify sites. No. of sites needing increased electrical service	Data not yet available
9	Increased wealth in priority populations	No. of contracts and dollars awarded to small and underrepresented companies	TBD

Source 1: GFO-23-601 awardee provided information and CEC staff analysis.

Assumptions, methods, and / or results for each Benefit Category are as follows:

Benefit 1 – Number of NEVI-compliant chargers in priority populations: 426 of the total 504 charging ports are in priority populations (California disadvantaged or low-income communities or federal Justice 40 communities)

Benefit 2 – Average dollars saved in fuel and maintenance: Cost savings were calculated from five-year forecasts for the number of battery-electric vehicle miles enabled, multiplied by a cost savings per mile of \$0.164.⁷² Savings include maintenance and refueling costs when comparing the national average of 22.9 miles per gallon for a gasoline-fueled light-duty vehicle, and 122 miles per gallon equivalent for a battery-electric light-duty vehicle. Assumptions for fuel cost include \$5.12/gallon of gasoline (based on May 2024 cost)⁷³ and \$0.40/kWh, which is equivalent to \$0.22/mile about \$0.11/mile, respectively.

Benefit 2 – Gallons of displaced fossil fuels: Assuming 12.5 percent utilization based on peak charging speed, this enables more than 359 million miles per year by battery-electric vehicles. Over a five-year period, nearly 1.8 billion electric miles are estimated to be driven, displacing 62.5 million gallons of gasoline.

Benefit 3 – Reduce transportation emissions: Staff used the Argonne-developed Alternative Fuel Life-Cycle Environmental and Economic Transportation Tool to calculate the emissions reductions from the 1.8 billion electric miles enabled by the

⁷² Burnham, Andrew, David Gohlke, Luke Rush, Thomas Stephens, Yan Zhou, Mark A. Delucchi, Alicia Birky, Chad Hunter, Zhenhong Lin, Shiqi Ou, Fei Xie, Camron Proctor, Steven Wiryadinata, Nawei Liu, and Madhur Boloor. (2021). [Comprehensive Total Cost of Ownership Quantification for Vehicles with Different Size Classes and Powertrains](#), Argonne National Laboratory.

⁷³ U.S Energy Information Administration. "[California All Grades All Formulations Retail Gasoline Prices.](#)"

504 NEVI charging ports. Emissions reductions are calculated for CO₂, NO_x, particulate matter 2.5 micrometers and smaller in diameter (PM_{2.5}), and reactive organic gases.

Benefit 4 – Increase parity in clean transportation access: A total of 426 of the 504 new charging ports (83 percent) are in priority populations.

Benefit 5 – Increase access to low-cost capital: Of the \$37.7 million awarded in Solicitation 1, \$31.3 million, or 83 percent, is allocated to those chargers within priority populations.

Benefit 6 – Increase clean energy jobs and training: Job creation is estimated at five jobs per million dollars of public investment in infrastructure. This estimate is consistent with international studies⁷⁴ on public investment and job creation, and internal reviews using IMpact Analysis for PLANning tools to estimate benefits of the CTP. Using the \$31.3 million of investment in priority populations, 157 jobs are estimated for these communities. The dollar amount spent on job training will be assessed at the end of construction when actual data become available.

Benefit 6 – Estimated training dollars spent in priority populations: The percentage of chargers in a priority population (83 percent), multiplied by the CTP average On-the-Job Training percentage of 60 percent, multiplied by the amount of NEVI dollars allocated (\$31,309,704). The "On-the-Job Training" percentage is an estimate from the National Renewable Energy Laboratory CTP Benefits Report that found 60 percent of jobs supported required less than six months of on-the-job training.⁷⁵

Benefit 7 – Charging for ride shares: Portion of charging events by transportation network companies. Data are not yet available on the use of NEVI-funded stations by these companies.

Benefit 8 – Increase equitable access to the grid: Investments required for grid access or service upgrades will not be known until project completion.

Benefit 9 – Increased wealth in priority populations: The number of contracts and dollars awarded to small and underrepresented companies. Data will begin to become available after projects are authorized and agreements are executed.

Labor and Workforce Considerations

The CEC and Caltrans continue to advance labor and workforce discussions to deliver on NEVI objectives of supporting EV charger installation and maintenance with a trained, experienced, and diverse workforce. During the past year, the state has

⁷⁴ Moszoro, Marian. (2021). [*The Direct Employment Impact of Public Investment*](#), International Monetary Fund.

⁷⁵ California Energy Commission Contract with the U.S. Department of Energy's National Renewable Energy Laboratory for technical support services on benefits assessment of CTP investments. CEC Contract 600-22-008.

continued to engage with industry, labor, and training partners to grow the workforce for installing, maintaining, and repairing chargers and ensure the workforce has the appropriate training and certifications in compliance with 23 CFR Section 680.106(j). In addition, California's NEVI Agencies have been working closely with other state agencies to ensure workforce training efforts support electric vehicle infrastructure and occupations for people from communities most in need.

In January 2024, the CEC formalized collaboration efforts with the California Workforce Development Board (CWDB) to increase economic opportunities for all Californians by approving a *Partnership Agreement & Business Use Case Proposal*. This agreement will support the development of workforce training to meet California's clean energy goals and promote greater access to quality employment in the clean energy sector. Tasks in the agreement include providing cross-agency education, technical assistance, and support; exchanging relevant industry and workforce information; and analyzing existing CEC and CWDB workforce development efforts and program outcomes.

In March 2024, the CEC approved a \$3.0 million interagency agreement with the California Employment Training Panel to train and certify 3,000 electricians through the EVITP. The Employment Training Panel, a department under the California Labor and Workforce Development Agency, provides training through a pay-for-performance method that advances high-road economic principles while providing skills training for industry work such as EV charger installation and maintenance. The Employment Training Panel will use CEC funding to offer training for C-10 licensed electricians to become EVITP-certified. Outreach, engagement, and 50 percent of project funds will be targeted at rural communities and priority populations. This is imperative because state law requires the use of EVITP certified electricians for EV chargers installed using certain state funds. A lack of EVITP certified electricians throughout the state could slow down equitable access to EV chargers. Therefore, the CEC and Employment Training Panel are collaborating to mitigate the potential of that occurring, while ensuring good paying jobs.

The CEC is also implementing 14 awards from its Inclusive, Diverse, Equitable, Accessible, and Local ZEV Workforce Pilot Project solicitation, including:

- **South Valley ZEV Talent Pipeline Project with Kern Community College District.** This project will develop EV charging curricula and training to address skill gaps in EV charging installation, service, and replacement, including preparation of electricians for EVITP certification.
- **ZEV Sustainable Equitable Employment Destination with the Community Resource Project, Inc.** The project will provide classroom-based hands-on training for ZEV manufacturing and maintenance; EV charger installation, operation, and service; and ZEV driving and operation.

More recently, the CEC released the first draft of the *ZEV Workforce Training and Development Strategy, A Roadmap for Clean Transportation Program Funding*.⁷⁶ The strategy outlines the CEC's role in ZEV workforce development, recognizes existing opportunities, and serves as a roadmap to building the career pathways necessary to support ZEVs and ZEV infrastructure. The draft identifies eight workforce program objectives and funding priorities to support workforce training and development for ZEVs and electric vehicle charging infrastructure.

On June 25, 2024, the CEC hosted a virtual ZEV Workforce Training and Development Workshop⁷⁷ to provide information on program updates and new activities related to workforce training and development for ZEVs and related infrastructure. The workshop was attended by 163 participants from municipal, state, and federal government agencies, as well as tribal representatives, utility providers, labor unions, educational providers, vehicle and charging manufacturers, charging network operators and service providers, advocacy groups and consulting agencies.

California's NEVI Agencies will include compliance, verification, and validation of all licensed trades, crafts, and contractors performing work under NEVI. In solicitation responses, these labor and workforce requirements will require specific documentation (for example, contractor's license number, EVITP certification number, and so forth). The agreements for NEVI projects will also specify ongoing documentation and data collection to validate compliance with all licensing requirements; ensure all businesses, electricians, or tradespeople are in good standing; and identify any incidences related to labor violations.

Physical Security and Cybersecurity

Caltrans and the CEC recognize the critical importance of cybersecurity in protecting EV charging infrastructure and the data it collects. Robust cybersecurity measures are essential to ensuring the reliability, security, and privacy of EV drivers. With the assistance from the Joint Office and national associations such as the American Association of State Highway and Transportation Officials and the National Association of State Energy Officials, the CEC and Caltrans are developing new cybersecurity policies. The measures below are best practices that have been shared with the CEC and Caltrans and are measures that may be included into future NEVI solicitations.

Physical Security and Cybersecurity Practices

California's NEVI Agencies are exploring additional requirements for NEVI grant recipients that address both physical and cybersecurity risks. These new measures may include:

⁷⁶ McKinny, Jana. (2024). [*Zero-Emission Vehicle Workforce Training and Development Strategy: A Roadmap for Clean Transportation Program Funding*](#), California Energy Commission. Publication Number: CEC-600-2024-049-SD.

⁷⁷ California Energy Commission. (2024, June 25). ["Clean Transportation Program – ZEV Workforce Training and Development Workshop."](#)

- **Physical security controls:** Limiting access to electrical equipment and data centers to authorized personnel only. These controls may involve security cameras, fencing, and access control systems.
- **Data security controls:** Implementing strong data security practices to protect sensitive information, such as encryption of data at rest and in transit and following the principle of least privilege for user access.
- **Cybersecurity awareness and training:** Providing regular cybersecurity awareness training to all personnel involved in the operation and maintenance of charging stations. This training should educate staff on cyber threats and ways to identify and report suspicious activity.

Grant recipients would also be required to oversee the implementation and maintenance of their cybersecurity program. The CEC would work with the grant recipient to ensure that cybersecurity risks are identified, addressed, and reported.

Cybersecurity Plan

Grant recipients may be required to develop a written cybersecurity plan that outlines the organization's approach to cybersecurity. This plan should address:

- **Risk assessment:** A comprehensive risk assessment to identify potential cybersecurity threats and vulnerabilities associated with the charging station infrastructure and data collection systems.
- **Security controls:** A description of the security controls that will be implemented to address identified risks.⁷⁸
- **Incident response plan:** A plan for responding to cybersecurity incidents, including procedures for detection, alerting the CEC and Cybersecurity and Infrastructure Security Agency, containment, eradication, and recovery.

Grant recipients would be encouraged to collaborate with electric utilities and other stakeholders to ensure the security of the electric grid. This collaboration may involve sharing information about potential threats and vulnerabilities and developing coordinated incident response plans.

Continuous Improvement and Cybersecurity Scorecard

Grant recipients would be required to continuously monitor and improve their cybersecurity programs. This monitoring may involve conducting periodic risk assessments, updating security controls as needed, and providing ongoing cybersecurity awareness training to staff.

⁷⁸For example: Joint Office of Energy and Transportation. "[Cybersecurity Procurement Language Clauses for RFPs and EVSP Contracts](#)."

A cybersecurity scorecard could be one measure to assess the effectiveness of grant recipients' cybersecurity programs. The scorecard would evaluate grant recipients on a range of criteria, including:

- The existence and adequacy of a cybersecurity program.
- The implementation of physical and data security controls.
- The completion of a risk assessment.
- The development of a cybersecurity plan.
- The provision of cybersecurity awareness training.

The results of the cybersecurity scorecard would be used to identify areas for improvement and provide targeted assistance to NEVI grant recipients. Implementing these cybersecurity measures could help ensure the secure and reliable operation of EV charging infrastructure in California.

Program Evaluation

California has tools for evaluating program effectiveness, monitoring charger deployment, and assessing charger needs for existing state programs. These tools include the CEC's biennial Zero-Emission Vehicle Infrastructure Plan⁷⁹ and the CEC's biennial assessment of benefits and contributions from the CTP.⁸⁰

To determine statewide charger needs, the CEC publishes biennial assessments, which include discussions of current charging infrastructure.⁸¹ To monitor charger deployment, the CEC publishes a dashboard with bi-annual updates on the number of EV chargers in California. All documents and tools related to program monitoring and effectiveness include public workshops, drafts, or opportunities for public comment, and all assist the state in monitoring and reporting progress on the EV charging network. Activities under the state's NEVI Plan are included in California's statewide assessments of infrastructure needs and reporting efforts.

As NEVI projects are awarded funding, begin construction, and open for service, the annual Deployment Plan will continue to be used for evaluation and reporting of NEVI-funded projects. Updates in the Deployment Plan will include the status of charging station deployment, equity and accessibility metrics, and operations and reliability for projects supported with NEVI funding.

⁷⁹ Lopez, Thanh and Madison Jarvis. (2022). [Zero-Emission Vehicle Infrastructure Plan](#), California Energy Commission. Publication Number: CEC-600-2022-054.

⁸⁰ Bailey, Stephanie, Jennifer Campagna, Mathew Cooper, Quentin Gee, Heidi Javanbakht, and Ben Wender. (2023). [2023 Integrated Energy Policy Report](#), California Energy Commission. Publication Number: CEC-100-2023-001-CMF. (See Appendix D.)

⁸¹ Davis, Adam, Tiffany Hoang, Thanh Lopez, Jeffrey Lu, Taylor Nguyen, Bob Noltz, Larry Rillera, Dustin Schell, and Micah Wofford. (2023). [Assembly Bill 2127 Second Electric Vehicle Charging Infrastructure Assessment: Assessing Charging Needs to Support Zero-Emission Vehicles in 2030 and 2035](#), California Energy Commission. Publication Number: CEC600-2024-003-CMR.

California has developed a program evaluation template to track NEVI projects across the following categories:

- **Charging station deployment:** Metrics include the power level and number of chargers installed.
- **Equity and accessibility:** Metrics include Justice40 status, operating hours, and restroom and food access.
- **Operations and reliability:** Metrics include uptime percentages, duration of charging sessions, and payment methods used.
- **Program funding and budget management:** Metrics include the average public dollar per charging port and match funding.
- **Project delivery:** Metrics include progress towards completing project phases and activities.
- **Environmental:** Metrics include anticipated GHG reductions per public dollar invested and expected air emissions reductions.
- **Economic:** Metrics include data on potential job creation and workforce development.
- **Stakeholder engagement:** Metrics include opportunities capturing user experience and engagement with NEVI stakeholders.

Metrics will be informed through a combination of data pulled from EV-ChART and other data reported directly from awardees to the CEC's commission agreement managers. CEC agreement managers will also track progress on NEVI projects through monthly calls, quarterly reports, invoice reviews, and critical project reviews with awardees.

Furthermore, lessons learned from funding solicitations, application review, and contract agreement processes will be incorporated into future solicitations and agreements in an effort to continually improve California's NEVI Plan.

Exhibit 2



U.S. Department
of Transportation
**Federal Highway
Administration**

1200 New Jersey Ave., SE
Washington, DC 20590

September 14, 2022

In Reply Refer To:
HEPN-30

Mr. Toks Omishakin
Director
California Department of Transportation
1120 N Street
Sacramento, CA 94273

Subject: Approval of California Electric Vehicle Infrastructure Deployment Plan

Dear Director Omishakin:

The Federal Highway Administration (FHWA) has completed the review of the California Electric Vehicle Infrastructure Deployment Plan required under the National Electric Vehicle Infrastructure (NEVI) Formula Program.¹ Based on the review and the recommendations provided by the Joint Office of Energy and Transportation (Joint Office), FHWA has determined that the California Electric Vehicle Infrastructure Deployment Plan is approved for implementation. With this approval, Fiscal Year 2022 funds are now available to California for obligation.

Also, States should be aware that FHWA has posted updated Frequently Asked Questions on our website at:

https://www.fhwa.dot.gov/environment/alternative_fuel_corridors/resources/nevi_program_faqs.pdf

The FHWA and the Joint Office will follow up with States on specific opportunities for improvement in future year plans and will continue to provide technical assistance and guidance as States continue to update plans and begin implementation.

A publicly accessible version of the California Electric Vehicle Infrastructure Deployment Plan and this approval letter will be available on the FHWA website at:

https://www.fhwa.dot.gov/environment/nevi/ev_deployment_plans/

¹ The NEVI program is authorized under the Bipartisan Infrastructure Law, enacted as the Infrastructure Investment and Jobs Act (IIJA), (Pub. L. 117-58)

Thank you for putting the United States on a path to a nationwide network of EV chargers that can ensure a convenient, affordable, reliable, and equitable charging experience for all users.

Sincerely,

A handwritten signature in black ink, reading "Gloria M. Shepherd". The signature is written in a cursive, flowing style.

Gloria M. Shepherd
Associate Administrator
Office of Planning, Environment and Realty

cc:

FHWA: HOA, HCC, HPL, HCF, California Division Office

Joint Office Interim Director: Alex Schroeder, Deputy Director: Rachael Nealer



U.S. Department
of Transportation
**Federal Highway
Administration**

1200 New Jersey Ave., SE
Washington, DC 20590

September 29, 2023

In Reply Refer To:
HEPN-30

Mr. Tony Tavares
Director
California Department of Transportation
1120 N Street
Sacramento, CA 94273

Subject: Approval of California Electric Vehicle Infrastructure Deployment Plan

Dear Director Tavares:

The Federal Highway Administration (FHWA) has completed the review of the California Electric Vehicle Infrastructure Deployment Plan required under the National Electric Vehicle Infrastructure (NEVI) Formula Program.¹ Based on the review and the recommendations provided by the Joint Office of Energy and Transportation (Joint Office), FHWA has determined that the California Electric Vehicle Infrastructure Deployment Plan is approved for implementation. With this approval, Fiscal Year 2024 funds are now available to California for obligation.

The FHWA acknowledges there continues to be confusion regarding equity considerations for State Plans, as well as the regulatory requirement for the Community Engagement Outcomes Report under 23 Code of Federal Regulations (CFR) 680.112(d), which must be incorporated into State Plans. To clarify, all State Plans must include a Community Engagement Outcomes Report that discusses their most recently approved State Plan and should include a forward-looking discussion on public engagement, the results of which will provide the basis for the Community Engagement Outcomes Report included in next year's State Plans. Your plan included both of these components. The FHWA and the Joint Office are committed to ensuring equitable benefits under the NEVI Formula Program and intend to provide additional outreach and training on these topics over the upcoming months, and well in advance of the development of next year's State Plans.

¹ The NEVI program is authorized under the Bipartisan Infrastructure Law, enacted as the Infrastructure Investment and Jobs Act (IIJA), (Pub. L. 117-58)

The following table details exceptions that were requested in the California Plan and the approval determinations by FHWA.

Location	Type	Determination
I-40 Ludlow to Fenner	50 miles between stations	Approved: valid for 1 year

The FHWA and the Joint Office will follow up with States on specific opportunities for improvement in future year plans and will continue to provide technical assistance and guidance as States continue implementation.

A publicly accessible version of the California Electric Vehicle Infrastructure Deployment Plan should be posted to the California Department of Transportation's website. This approval letter will be available on the FHWA website at https://www.fhwa.dot.gov/environment/nevi/ev_deployment_plans/ along with a link to the Plan on the State website.

Thank you for putting the United States on a path to a nationwide network of EV chargers that can ensure a convenient, affordable, reliable, and equitable charging experience for all users.

Sincerely,



Emily Biondi
Associate Administrator
Office of Planning, Environment and Realty

cc: FHWA: HOA, HCC, HPL, HCF, California Division Office
Joint Office Director: Gabe Klein
Deputy Director: Rachael Nealer



U.S. Department
of Transportation
**Federal Highway
Administration**

1200 New Jersey Ave., SE
Washington, DC 20590

November 15, 2024

In Reply Refer To:
HEPN-30

Mr. Tony Tavares
Director
California Department of Transportation
1120 N Street
Sacramento, CA 94273

Subject: Approval of California Electric Vehicle Infrastructure Deployment Plan

Dear Director Tavares:

The Federal Highway Administration (FHWA) has completed the review of the California Electric Vehicle Infrastructure Deployment Plan required under the National Electric Vehicle Infrastructure (NEVI) Formula Program.¹ Based on the review and the recommendations provided by the Joint Office of Energy and Transportation (Joint Office), FHWA has determined that the California Electric Vehicle Infrastructure Deployment Plan is approved for implementation. With this approval, Fiscal Year 2025 funds are now available to California for obligation.

The following table details exceptions that were requested in the California Plan and the approval determinations by FHWA.

Location	Type	Determination
I-40 Ludlow to Fenner	50 miles between stations	Approved: valid for 1 year

The FHWA and the Joint Office will follow up with States on specific opportunities for improvement in future year plans and will continue to provide technical assistance and guidance as States continue implementation.

A publicly accessible version of the California Electric Vehicle Infrastructure Deployment Plan should be posted to the California Department of Transportation's website. This approval letter will be available on the FHWA website at https://www.fhwa.dot.gov/environment/nevi/ev_deployment_plans/ along with a link to the Plan on the State website.

¹ The NEVI program is authorized under the Bipartisan Infrastructure Law, enacted as the Infrastructure Investment and Jobs Act (IIJA), (Pub. L. 117-58)

Thank you for putting the United States on a path to a nationwide network of EV chargers that can ensure a convenient, affordable, reliable, and equitable charging experience for all users.

Sincerely,

A handwritten signature in black ink that reads "Emily Biondi". The script is cursive and fluid, with the first letters of each word being capitalized and prominent.

Emily Biondi
Associate Administrator
Office of Planning, Environment and Realty

cc: FHWA: HOA, HCC, HPL, HCF, California Division Office
Joint Office Director: Gabe Klein

Exhibit 3

U.S. Department of Transportation
Federal Highway Administration
1200 New Jersey Avenue, SE
Washington, DC 20590
202-366-4000

INFRASTRUCTURE INVESTMENT AND JOBS ACT

Home | Overview | Funding | Assistance / Local Support | Fact Sheets | Guidance / Regs

ELECTRIC VEHICLES

5-year National Electric Vehicle Infrastructure Funding by State

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

FY 2022-2026 FUNDING FOR THE NATIONAL ELECTRIC VEHICLE INFRASTRUCTURE
FORMULA PROGRAM UNDER THE INFRASTRUCTURE INVESTMENT AND JOBS ACT

State	Actual FY 2022	Estimated FY 2023	Estimated FY 2024	Estimated FY 2025	Estimated FY 2026	Estimated Total
Alabama	11,738,801	16,892,267	16,892,384	16,892,399	16,892,434	79,308,285
Alaska	7,758,240	11,164,195	11,164,272	11,164,282	11,164,305	52,415,294
Arizona	11,320,762	16,290,704	16,290,816	16,290,830	16,290,864	76,483,976
Arkansas	8,010,850	11,527,704	11,527,783	11,527,793	11,527,817	54,121,947
California	56,789,406	81,720,595	81,721,161	81,721,230	81,721,400	383,673,792
Colorado	8,368,277	12,042,045	12,042,129	12,042,139	12,042,164	56,536,754
Connecticut	7,771,342	11,183,049	11,183,127	11,183,136	11,183,159	52,503,813
Delaware	2,617,339	3,766,380	3,766,406	3,766,409	3,766,417	17,682,951
Dist. of Col.	2,468,807	3,552,641	3,552,666	3,552,669	3,552,676	16,679,459
Florida	29,315,442	42,185,251	42,185,543	42,185,579	42,185,666	198,057,481
Georgia	19,978,342	28,749,059	28,749,258	28,749,282	28,749,342	134,975,283
Hawaii	2,616,956	3,765,829	3,765,855	3,765,858	3,765,866	17,680,364
Idaho	4,425,511	6,368,360	6,368,404	6,368,409	6,368,422	29,899,106
Illinois	21,998,178	31,655,626	31,655,845	31,655,872	31,655,938	148,621,459
Indiana	14,743,125	21,215,523	21,215,670	21,215,688	21,215,732	99,605,738
Iowa	7,604,168	10,942,483	10,942,559	10,942,568	10,942,591	51,374,369
Kansas	5,847,059	8,413,984	8,414,042	8,414,049	8,414,067	39,503,201

Kentucky	10,280,470	14,793,712	14,793,815	14,793,827	14,793,858	69,455,682
Louisiana	10,859,512	15,626,960	15,627,068	15,627,081	15,627,114	73,367,735
Maine	2,856,158	4,110,043	4,110,072	4,110,075	4,110,084	19,296,432
Maryland	9,298,080	13,380,042	13,380,134	13,380,146	13,380,174	62,818,576
Massachusetts	9,397,238	13,522,732	13,522,825	13,522,837	13,522,865	63,488,497
Michigan	16,290,764	23,442,593	23,442,756	23,442,775	23,442,824	110,061,712
Minnesota	10,089,418	14,518,786	14,518,886	14,518,899	14,518,929	68,164,918
Mississippi	7,483,268	10,768,508	10,768,582	10,768,591	10,768,614	50,557,563
Missouri	14,647,722	21,078,237	21,078,383	21,078,400	21,078,444	98,961,186
Montana	6,348,350	9,135,347	9,135,410	9,135,418	9,135,437	42,889,962
Nebraska	4,472,243	6,435,608	6,435,652	6,435,658	6,435,671	30,214,832
Nevada	5,618,414	8,084,961	8,085,017	8,085,024	8,085,041	37,958,457
New Hampshire	2,556,450	3,678,760	3,678,786	3,678,789	3,678,796	17,271,581
New Jersey	15,448,790	22,230,983	22,231,137	22,231,156	22,231,202	104,373,268
New Mexico	5,681,977	8,176,429	8,176,486	8,176,493	8,176,510	38,387,895
New York	25,971,644	37,373,488	37,373,747	37,373,779	37,373,856	175,466,514
North Carolina	16,137,196	23,221,608	23,221,768	23,221,788	23,221,836	109,024,196
North Dakota	3,841,352	5,527,749	5,527,787	5,527,792	5,527,804	25,952,484
Ohio	20,739,853	29,844,883	29,845,089	29,845,114	29,845,177	140,120,116
Oklahoma	9,812,934	14,120,923	14,121,021	14,121,032	14,121,062	66,296,972
Oregon	7,733,679	11,128,851	11,128,928	11,128,937	11,128,961	52,249,356
Pennsylvania	25,386,631	36,531,648	36,531,901	36,531,932	36,532,008	171,514,120
Puerto Rico	2,020,490	2,915,577	2,909,472	2,908,724	2,906,890	13,661,153
Rhode Island	3,383,835	4,869,376	4,869,410	4,869,414	4,869,424	22,861,459
South Carolina	10,360,855	14,909,387	14,909,490	14,909,503	14,909,534	69,998,769
South Dakota	4,363,463	6,279,072	6,279,116	6,279,121	6,279,134	29,479,906
Tennessee	13,074,884	18,814,906	18,815,036	18,815,052	18,815,091	88,334,969
Texas	60,356,706	86,853,980	86,854,582	86,854,655	86,854,836	407,774,759
Utah	5,372,731	7,731,421	7,731,474	7,731,481	7,731,497	36,298,604
Vermont	3,140,247	4,518,851	4,518,882	4,518,886	4,518,895	21,215,761
Virginia	15,745,244	22,657,583	22,657,740	22,657,759	22,657,806	106,376,132
Washington	10,489,110	15,093,948	15,094,052	15,094,065	15,094,096	70,865,271

West Virginia	6,761,785	9,730,285	9,730,352	9,730,361	9,730,381	45,683,164
Wisconsin	11,642,061	16,753,057	16,753,173	16,753,188	16,753,222	78,654,701
Wyoming	3,963,841	5,704,011	5,704,051	5,704,056	5,704,067	26,780,026
Total	615,000,000	885,000,000	885,000,000	885,000,000	885,000,000	4,155,000,000

Page last modified on January 31, 2025